FOOD BASED MENUS

Planning and Implementation Manual

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MAIN IDEAS:
- *Reasons for the School Meals Initiative for Healthy Children*
- *Goals of the School Meals Initiative for Healthy Children*
- *Required nutrient standards*
- *Action steps for making menu changes*

Lesson 1: USDA School Meals Initiative for Healthy Children

In recent years, concerns have emerged regarding the overall nutritional content of school meals. These concerns address findings that the diet of Americans has changed from being low in nutrients and adequate in calories to containing an overabundance of calories, fat, saturated fat, cholesterol and sodium. At the same time, Americans eat too few grains, fruits and vegetables. A good diet can help to reduce the occurrence of chronic health diseases and promote good health and well being.

As a first step in dealing with these concerns, the United States Department of Agriculture (USDA), in conjunction with the Department of Health and Human Services, issued the Dietary Guidelines for Americans, which established recommendations on diet changes which, if implemented, could bring about a healthy American diet. These guidelines call for moderation and the avoidance of extremes in the diet. USDA is committed to fully implementing the Dietary Guidelines in school meals. Page 1 in the Reference Section provides a summary of the 1995 Dietary Guidelines.

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Moving Toward Healthier School Meals

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The USDA School Meals Initiative for Healthy Children underscores our national health responsibility to provide healthy school meals that are consistent with the Recommended Dietary Allowances (RDA), the calorie goals and the Dietary Guidelines for Americans.

The concept of a healthy school meal encompasses more than just meeting the Dietary Guidelines for Americans. It also means meeting the following additional goals:

ADDITIONAL GOALS FOR HEALTHY SCHOOL MEALS

1. Incorporate culinary principles of taste and presentation.
2. Focus on customers served, incorporating regional, cultural, ethnic and other preferences.
3. Provide safe meals for children.
4. Make meals accessible to all children.
5. Reinforce classroom nutrition education by providing a "learning laboratory" for healthy food choices.
6. Assist in increasing appreciation of food origins, cultural food history, variety of foods and relationship to environment and agriculture.
7. Support and teach the principles of the "social meal."
8. Provide education in the preparation and service of healthy, economical meals.
9. Serve in an encouraging environment with adequate time for meal service.
10. Link with a school nutrition policy promoting healthy food choices throughout the school.

USDA recognized that changes in the traditional meal patterns were needed in order to implement these nutrition goals in schools. As a result, there are three alternative menu planning systems as a replacement for the traditional meal patterns: Food Based Menus, NuMenus and Assisted

NuMenus. One of these three new menu planning systems will serve as the method for your school district to implement the Dietary Guideline goals as well as meet the Recommended Dietary Allowances and the calorie needs.

The choice of which system to use is up to each school food authority. Schools may choose more than one system if the needs of schools within the district vary. Schools may also switch from one system to another at a later date. For example, most schools in Vermont are likely to start out with the Food Based Menus option; then, if they acquire a computer at a later date, they may decide to change to the NuMenus option.

Meeting Nutrition Goals

The objective all three menu planning systems (Food Based, NuMenus, and Assisted NuMenus) is to meet the nutrition goals shown below.

NUTRITION GOALS
School Meals Initiative for Healthy Children

- Recommended Dietary Allowances
  - 1/4 RDA for Breakfast
  - 1/3 RDA for Lunch
- Calorie Goals
  - Age appropriate
- Dietary Guidelines for Americans
  - Balanced nutrient content

With Food Based Menus the school is not required to conduct a nutrient analysis of the menus to measure if they have achieved these goals. The state agency will do so when they conduct a review.

Meeting Nutrient Standards

*A **nutrient standard** is the required level of calories and nutrients for a specific age group.* The Nutrient Standards for healthy school meals were established for all three of the menu planning systems by weighting and averaging the

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Recommended Dietary Allowances (RDA) for different groups of children. The RDAs specify the required level of calories, nutrients and dietary components for a specific ages. (See page 2 in the Reference Section for a copy of the RDAs.)

The nutrient standards for school meals are set using the RDA because they are considered to be the best estimate of how much of a nutrient intake is required to adequately meet the known nutrient needs of practically all healthy people. RDAs are:

- set by a committee selected by the National Academy of Science and approved by National Research Council.
- based on available scientific evidence and revised periodically.
- reexamined by a new committee for each revision.
- set as recommendations with a margin of safety, not as requirements.
- set for a healthy person not under stress of illness.

Planned and offered breakfast and/or lunch menus averaged over a week should meet the Nutrient Standard of the age or grade group for which they are intended.

As you can see from the charts on page 1-5, nutrient standards have been set for both breakfast and lunch for:

- Total calories
- Percent of calories from fat (30 percent or less)
- Percent of calories from saturated fat (10 percent or less)
- Protein
- Calcium
- Iron
- Vitamin A
- Vitamin C

Foods containing these nutrients typically contain the other essential nutrients that are not specified in the Nutrient Standards.

Calories and Nutrient Levels for School Breakfast (school week averages)			
	Pre-school	*Grades K-12*	*Option Grades 7-12*
Energy Allowances	388 (calories)	554 (calories)	618 (calories)
Total fat[3]	13g[1]	18g[1]	21g[1]
Total saturated fat[3]	4g[2]	6g[2]	7g[2]
Protein	5g	10g	12g
Calcium	200mg	257mg	300mg
Iron	2.5mg	3.0mg	3.4mg
Vitamin A	113RE	197RE	225RE
Vitamin C	11mg	13mg	14mg

[1] Total fat not to exceed 30 percent over a school week
[2] Saturated fat to be less than 10 percent over a school week
[3] The grams of fat will vary depending on actual level of calories because they are based on percentages.

Calories and Nutrient Levels for School Lunch (school week averages)				
	Pre-school	*Grades K-6*	*Grades 7-12*	*Grades K-3 (Option)*
Energy Allowances	517 calories	664 calories	825 calories	633 calories
Total fat[3]	17 g[1]	22g[1]	28g[1]	21g[1]
Total saturated fat[3]	6g[2]	7g[2]	9g[2]	7g[2]
Protein	7g	10g	16g	9g
Calcium	267mg	286mg	400mg	267mg
Iron	3.3mg	3.5mg	4.5mg	3.3mg
Vitamin A	150RE	224RE	300RE	200RE
Vitamin C	14mg	15mg	18mg	15mg

[1] Total fat not to exceed 30 percent over a school week
[2] Saturated fat to be less than 10 percent over a school week
[3] The grams of fat will vary depending on actual level of calories because they are based on percentages.

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Other nutrients and dietary components that will be analyzed by the state include cholesterol, sodium, dietary fiber, and carbohydrate. No quantity standards have been set for these dietary components; they will be included in the analysis for points of comparison over time. (*e.g.*, Is dietary fiber increasing? Are sodium and cholesterol levels going down?)

The calorie and nutrient needs of children vary by their sex, age, size, and activity level. The calorie standards for breakfast and lunch are estimates of the minimum energy needed. But some children, especially older males, may require considerably more than the minimum. Children who are large for their age or more active also need more calories. Menu planners should adjust the amounts of foods served to provide for the calorie needs of all children.

Implementing a New Menu Planning System

Menu planners are faced with tremendous challenges and opportunities for improving the health of American children. Serving healthier meals is a major step toward achieving that objective. Making changes is more difficult for some than others. But keep in mind that learning new skills and implementing them becomes easier over time. For example, remember when you were sixteen and anxious to get your driver's license so you could have some wheels? Learning to drive required taking classes, practicing, patience and personal investment of both money and time. Changing your menu planning system has some of the same requirements

Training

Being trained in Food Based Menu Planning to learn about the new system is similar to taking

driving lessons or completion of a Driver Training class when learning to drive.

Practice

Was it easy to learn to drive? Learning anything new means trials, errors and lots of patience.

Personal Investment

You invested time in learning the rules of the road and practicing driving; there were insurance and gas costs. Implementing healthy school meals is likely to take more extra time and effort than additional money. Once you master the new system, you will be able to plan meals without thinking about every step in the process. The long-term benefits to the students and to your program will outweigh the initial investment of time.

Key Action Steps

No matter which menu planning system option a school uses, there are specific steps to take to ensure healthy, attractive, tasty and acceptable school meals.

- ***Plan menus***
- ***Purchase food***
- ***Modify recipes***
- ***Use appropriate preparation techniques***
- ***Encourage students to consume the meals***

The training provided by the state and the materials in this book will help you carry out these key action steps.

MAIN IDEAS:
- *Major differences between traditional meal pattern and the enhanced meal pattern*
- *Meal pattern requirements for Food Based Menus*
- *Meeting nutrient standards*
- *Other regulations governing school meals*

Lesson 2: Program Requirements – Food Based Menus

Food Based Menus is one of three menu planning options in the USDA School Meals Initiative for Healthy Children. The other two are NuMenus and Assisted NuMenus, which are based on the nutrient content of the meal. All of the menu planning systems use foods to develop menus for school food service. ***With Food Based Menus, foods from specific food groups must be offered in specific quantities.***

The program requirements for Food Based Menus are very similar to the traditional meal pattern. The material in this manual is put together based on the assumption that you are very familiar with the traditional meal pattern; therefore, efforts are focused on explaining program requirements that have changed.

A copy of the Food Based Menus Meal Plan for Lunch is in the Reference Section, page 3; page 4 in the Reference Section is the Food Based Menus Meal Plan for Breakfast.

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Food Based Menus--The Basics

The traditional meal pattern provided adequate calories and most nutrients. However, it did not have quantitative limits for fat and saturated fat, nor did it encourage increased consumption of complex carbohydrates and dietary fiber.

Few Changes For Major Impact

Food Based Menus are an enhancement of the traditional meal pattern. The goal in revising the traditional pattern into a plan for good health was to retain the component structure and as many other features (such as the serving sizes and the types of foods in the components) of the traditional meal pattern as possible to facilitate implementation at the local level. The major differences are as follows:

1. With Food Based Menus, there are two required grade groups for lunch (grades K-6 and 7-12). This is to more closely match the calorie and nutrient needs to children of certain ages or grade levels.

2. The Food Based Menus call for increased quantities of vegetables/fruits and grains/breads for lunch for both age groups. Since specific standards for fat have been set, it is necessary to increase the calories from lowfat foods to replace the calories lost from reductions in total fat. Meals low in fat may be too low in calories if the calories are not increased from other foods such as whole grains, breads, cereals, vegetables and fruits.

3. A grain-based dessert served at lunch may count toward the grains/breads requirement. Additional specific differences between the Traditional Meal Pattern and the Food Based Menus Enhanced Meal Pattern are shown in the chart on page 2-3.

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Food Based Menus Key Points

- Enhancement to traditional meal pattern
- Nutrient Standards
- Two required grade groups
- Food components and items
- Changes for lunch
- No changes for breakfast

Comparison of Traditional Meal Pattern and Enhanced Meal Pattern

LUNCH	TRADITIONAL MEAL PATTERN			ENHANCED MEAL PATTERN		
Age groups	Required grades 4-12	Optional Preschool K-3 Grades 4-6 Grades 7-12		Required Ages 1-2 Preschool Grades K-6 Grades 7-12		Optional K-3
Meal Components	Fluid Milk Meat/Meat Alternate Vegetables/Fruits Bread/Bread Alternate			Milk (as a beverage) Meat/Meat Alternate Vegetables/Fruits Grains/Breads		
Food Items and minimum amounts to offer		K-3	4-12		K-6	7-12
	Fluid Milk	8 fluid oz.	8 fluid oz.	Milk	8 fluid oz.	8 fluid oz.
	Meat/Meat Alternate	1 ½ oz. or equivalent	2 oz. or equivalent	Meat/Meat Alternate	2 oz.	2 oz.
	Vegetables/ Fruits	two servings each day to total ½ cup	two servings each day to total 3/4 cup	Vegetables/ Fruits	two servings each day to total 3/4 cup plus additional ½ cup over a week	two servings each day to total 1 cup
	Bread/Bread Alternate	1 oz. or equivalent each day; at least 8 servings over a week	1 oz. or equivalent each day; at least 8 servings over a week	Grains/Breads	at least 1 serv. Per day; total of 12 servings per week	at least 1 serving per day; total of 15 servings per week
Minimum serving sizes	Fluid Milk	8 oz.	8 oz.	Milk	8 oz.	8 oz.
	Meat/Meat Alternate	1 ½ oz.	2 oz.	Meat/Meat Alternate	2 oz.	2 oz.
	Vegetables/ Fruits	1/8 cup or 2 Tbsp.	1/8 cup or 2 Tbsp.	Vegetables/ Fruits	1/8 cup or 2 Tbsp.	1/8 cup or 2 Tbsp.
	Bread/Bread Alternate	1 oz. or equivalent	1 oz. or equivalent	Grains/Breads	1/4 oz. or equivalent	1/4 oz. or equivalent
Grain-based desserts counting toward grain component	NO			YES--up to one serving per day may be a dessert		

Food Components and Items

*A **food component** means one of the four food groups which compose the reimbursable school breakfast or lunch* (i.e., meat or meat alternate, milk, grains/breads and vegetables/fruits).

*A **food item** means:*

- One of the five required foods for lunch
  - Meat or Meat Alternate
  - Milk
  - Grains/Breads
  - Two Vegetables and/or Fruits
- One of the four required foods for breakfast
  - Two Grains/Breads OR Two Meat/Meat Alternates OR one each of Grains/Breads and Meat/Meat Alternates
  - Milk
  - Juice/Fruit/Vegetable

The number of food items is specified by day and by week in the new menu plan for lunch. The number of food items for breakfast remains a daily criteria. For each food item, a minimum number and size of servings per day and/or week is specified.

The food components and food items are designed to provide the minimum RDA levels for calories and specified key nutrients and to meet the recommended Dietary Guidelines level of total fat and saturated fat over a school week.

Offer versus Serve

Offer versus Serve for Food Based Menus is the same as under the traditional meal pattern. The main points for lunch and breakfast are highlighted on page 2-5.

Goals of Offer versus Serve

- Minimize plate waste thus reducing food costs.
- Encourage students to eat what they choose.

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OFFER VERSUS SERVE	
National School Lunch Program	**Breakfast Program**
Students must be offered all five required food items at lunch: • One serving each of: - Meat/Meat Alternate - Milk - Grains/Breads • Two servings of: - Vegetables/Fruits Senior high students are allowed to decline two of the five required food items. Offer versus Serve is optional below the senior high level. Students below the senior high level may be permitted to decline one or two of the five required food items.	At breakfast, students must be offered all four required food items: • One serving each of: – Milk – Juice/Fruit/Vegetable • One of each or two of: – Grains/Breads – Meat/Meat Alternate At the option of school food authority, each school may allow the students to refuse one food item from any component.
In addition, the following also apply to both lunch and breakfast when offer versus serve is implemented. ▸ The lunch or breakfast must be priced as a unit (i.e., students pay the same whether they take three, four, or five items for lunch) ▸ The serving sizes must equal the minimum quantities required by age or grade group. ▸ Students have the option of which item to decline. ▸ Students are allowed to take smaller portions of the declined food items. The required food items taken by the student, however, must be a full serving.	

Within the minimum quantities specified in the regulations for the various age and grade groups, the menu planner establishes what constitutes a "serving."

Other Regulations

Alternate Foods for Meals

The current regulations for Enriched Macaroni Products with Fortified Protein, Cheese Alternate Products, Vegetable Protein Products and Formulated Grain-Fruit Products still apply.

Competitive Foods and Foods of Minimal Nutritional Value

The current regulations still apply in this area. The major points are outlined below.

Competitive foods means any foods sold in competition with the program to children in food service areas during the lunch periods.

A ***Food of Minimal Nutritional Value*** means:
1. In the case of artificially sweetened foods, a food which provides less than five percent of the Reference Daily Intakes (RDI) for each of eight specified nutrients per serving; and
2. In the case of all other foods, a food which provides less than five percent of the RDI for each of eight specified nutrients per 100 calories and less than five percent of the RDI for each of eight specified nutrients per serving.
The eight nutrients to be assessed for this purpose are: (1) protein; (2) vitamin A; (3) vitamin C; (4) niacin; (5) riboflavin; (6) thiamin; (7) calcium; and (8) iron.

General Information--State agencies and school food authorities shall establish such rules or regulations as are necessary to control the sale of foods in competition with lunches served under the Program. Such rules or regulations shall prohibit the sale of foods of minimal nutritional value, as listed above, in the food service areas during the lunch periods. The sale of other competitive foods may, at the discretion of the state agency and school food authority, be allowed in the food service area during the lunch period only if all income from the sale of such foods is accrued to the benefit of the nonprofit school food service or the school or student organizations approved by the school. State agencies and school food authorities may impose additional restrictions on the sale of and income from all foods sold at any time throughout schools participating in the Program.

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USDA Child Nutrition Labeling Program

The current regulations still apply to the USDA Child Nutrition (CN) Labeling Program.

What is the Child Nutrition (CN) Labeling Program?.

The Child Nutrition (CN) Labeling Program is a voluntary Federal labeling program for the Child Nutrition Programs.

Who runs the programs?

The CN Labeling Program is run by the Food and Consumer Service (FCS) of the U.S. Department of Agriculture (USDA) in cooperation with the following agencies:

- Food Safety and Inspection Service
- Agricultural Marketing Service
- National Marine Fisheries Service

The program is operated by FCS directly with commercial food processing firms.

How does the program work?

The program requires an evaluation of a product's formulation by FCS to determine its contribution toward meal pattern requirements. It allows manufacturers to state this contribution on their labels. The program provides a warranty against audit claims for purchases of CN-labeled products.

What products are eligible for CN labels?

- Main dish products which contribute to the meat/meat alternate component of the meal pattern requirements. Examples of these products include beef patties, cheese or meat pizzas, meat or cheese and bean burritos, egg rolls and breaded fish portions.
- Juice and juice drink products which contain at least 50 percent full-strength juice by volume. This includes such products as grape drink, fruit punch, and juice drink bars.

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To carry CN labels, eligible products must:

- Be produced under Federal Inspection by USDA or USDC.
- Have the contribution of meat/meat alternate products determined using yields in the USDA Food Buying Guide.

Are manufacturers required to CN label products?

There is no Federal requirement that anyone make or purchase CN-labeled products. Purchasing decisions are left to the local level. If a CN-labeled product is desired, this must be clearly stated in purchasing specifications.

What are the advantages of using CN labels?

- A CN label statement clearly identifies the contribution of a product toward the meal pattern requirements. It protects you from exaggerated claims about a product.
- A CN label provides a warranty against audit claims, if used according to the manufacturer's directions.

Do CN-labeled products cost more?

They should not. Cost comparison between two meat products should be based on the cost per ounce or pound that contributes to the meal pattern requirements, not on the product cost per ounce or pound.

How do I identify a CN label?

A CN label will always contain the following:

- The CN logo which is a distinct border.
- The meal pattern contribution statement.
- A six-digit product identification number.
- USDA/FCS authorization.
- The month and year of approval.

An example of a CN label is shown at the top of page 2-9.

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This 5.00-oz. Pizza with Ground Beef and Vegetable Protein Product provides 2.00 oz. equivalent meat/meat alternate, ½ cup serving of vegetable, and 1½ servings of bread alternate for the Child Nutrition Meal Pattern Requirements. Use of this logo and statement authorized by the Food and Consumer Service, USDA 05-84.

CN

For additional information about the CN Labeling Program, contact:

U.S. Department of Agriculture
Nutrition and Technical Services Division
Food and Consumer Service
Room 607
3101 Park Center Drive
Alexandria, VA 22302
(703) 305-2556

Benefits of Food Based Menus

- Enhancement to traditional meal pattern
- Less retraining
- Component structure for nutrition education
- Standard quantities for vendors
- No need for computer hardware or software

MAIN IDEAS:
- *The purposes of menu planning*
- *How to plan menus to meet the Food Based Menus enhanced meal pattern*
- *The importance of accurate menu production records*

Lesson 3: Planning Food Based Menus

The menu is the basis for all food service program activity. The menu drives the planning, purchasing, production, service, and cleanup functions. Menu planning also provides an opportunity for nutrition education and for involving children, parents and teachers in the programs.

The basic goal of menu planning is to put together foods into a plan that will result in a menu that is nutritious and appeals to students.

The menu must be planned to be in **compliance with federal regulations** and **program requirements**. The menu determines the **nutrient content** of the meal and the **meal acceptability**. The acceptability influences the **participation rate**. The menu also determines the **food cost**, and its complexity affects **labor costs**. The menu controls what **food production** and **purchasing** must be done to produce the menu. The food production which must be done determines **how the work is scheduled**. The food to be produced determines what the **equipment use and needs** are. **Employee training needs** are determined by what foods are

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on the menu and how they are prepared and served. The menu plan sets the food service program in motion and controls many of its functions.

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The Menu as a Management Tool

Successful management of the National School Lunch and School Breakfast Programs starts with menu planning. The menu needs to be considered as a management tool that controls many program functions. Well-planned menus can help a program run smoothly when they are based on the resources available to the food service operation. If there are insufficient resources, ways must be found to acquire these resources.

Knowledge Required

The quality of the meals and the success of the program depend on the knowledge and skills of the menu planner.

Menu planners need to know:

- Program purposes and goals, requirements and recommendations.
- Students' food preferences.
- Food costs and the amount of money available.
- Foods available for the menu planning period.
- The availability and experience of personnel.
- Kitchen layout, type and capacity of equipment.
- Food preparation and work scheduling.
- Food merchandising techniques so that the meal will be accepted by the customer.

Using Cycle Menus

What is your reaction when someone mentions cycle menus? Boring? Not very creative? Too confining? Time saving? An important tool in good management?

It is true that cycle menus can be all the negative things mentioned in the preceding paragraph. However, properly developed cycle menus for breakfast and lunch can save time and increase efficiency as well as insure that meal pattern requirements are being met, without compromising student acceptability.

Develop a 5-day Cycle
Since menu planning for Food Based Menus needs to be done on the basis of a week, cycle menus can be developed for a period of a week. Over time, you can develop several weekly (5-day) menu plans that can be implemented as needed. To prevent boredom, switch the order of the weeks and/or switch the order of days within a week each time you use the cycle. You might also omit a week or two.

It is also possible to develop a week cycle that includes a holiday or other special celebrations to be used when needed. Week cycles can also be planned for different times of the year to take advantage of foods that are in season.

Where to Start
If you are not currently using cycle menus, start working on a week at a time. Study your previous year's menus to spot menus that you repeated. This could be a good starting point for you. It takes time to develop a good cycle of menus that works in terms of acceptability, adaptability, and nutrient content.

Although you will not be conducting nutrient analyses of your menus, you will need to be sure to follow guidelines for variety in menu items so that you avoid compromising the nutrient value of the menus. For example, you would want to avoid offering a high-fat main dish each day of the week, or all grain/bread items that contain no whole grains, or not enough foods that are high in vitamin A or C. Pages 5-16 in the Reference Section can help ensure variety and good nutrition in your menus.

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To avoid repetition in a cycle menu, changes may be made to incorporate seasonal variations and special events into the cycle. It also allows USDA commodities to be included. This is still easier than starting over every month.

Variety
Variety in the menu encourages consumption of healthy foods. Choices in meal components should be provided whenever possible. Offer students a selection of foods and types of milk from which to choose.

To increase food consumption and participation in schools that do not offer choices each day, no one meat or form of meat should be served more than three times in a week. ("Form of meat" refers to ground, sliced, pieces, etc.)

A list of all of the school's recipes, vendor products and other program foods should be made for planning purposes. There is a tendency to repeat the same items rather than offering all of the available items occasionally.

Lunch, breakfast and special meal menus should be coordinated in order to avoid serving the same food at different meals.

Adjust Portion Size
Adjust the portion size for the various age or grade levels of children. As mentioned under cycle menus, if you have planned a basic cycle menu for one age group, you may change the portion sizes to meet the nutritional needs and/or program requirements of another age group.

Minimize Waste
When portion sizes are adjusted, food waste with younger students will be minimized. Portion sizes that are too large discourage young children from eating. Portion sizes that are too large also may lead to overeating.

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The ABCs of Menu Planning

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If you tried to teach someone how to drive a car, it would be difficult to remember all of the steps you go through to actually drive. It is too automatic. You do not have to think about it. That is the way it will be when you plan menus using the new menu planning system you select. When you start, you will have to think about each step. But after a while, it will become automatic.

The ABCs of Menu Planning

1. Collect menu resources
2. Select the grade or age group
3. Determine number of choices
4. Evaluate starting point
5. Determine a time period
6. Select the entree or main course
7. Select the other menu item(s)
8. Provide fluid milk choices
9. Meet nutrition goals
10. Evaluate

Collect Menu Resources

There are many menu resources available to menu planners, including their own old menus. In addition, recipe files such as the *USDA Quantity Recipes for School Meals*, food trade journals, menu sales history, production records, inventory records and a list of USDA commodities will all help provide ideas. The menu planners will also need the program requirements for the menu planning system they are using as well as the USDA Food Buying Guide. Another important resource is the school calendar with important dates.

In addition to these resources, the *USDA Menu Planning Guide* and the *Tool Kit for Healthy School Meals,* which has a selection of healthy recipes and information on how to use and market them in your school, are useful.

Select the Grade or Age Group

First select the grade or age group to plan for based on the grades in the school or group of schools for which the menu is planned. The grade or age group selected will determine the type of menu items and the appropriate portion sizes. Later, the portion sizes may be adjusted for other grades or age groups, or as needed to meet program requirements.

Determine Choices

Determine the number of choices that will be offered for each food item or component for Food Based Menus. Providing choices and variety is an important concept whether planning the meat or meat alternate entrees or the grains/breads item for breakfast or vegetables/fruits for lunch.

The number of choices you offer in each category depends on your own operation. Look for a balance in cost, nutrients and equipment usage, as well as the labor needed to prepare each item. You may start by adding one or more entrees and then adding a selection of side dishes that complement the entree choices.

Offering choices has the benefit of allowing the introduction of new foods without the usual drop in participation. Letting students "take a taste" of a new menu offering is the ideal way to introduce students to a wider variety of menu selections.

Offering choices at sites where Offer versus Serve is in place encourages students to select foods they intend to eat. Offering choices does not need to be extensive; even two choices gives students the opportunity to express their individual preference and increases the likelihood that a full meal will be selected.

Evaluate Your Starting Point

Start by looking at your current menus, purchased products, recipes and preparation techniques. Review the number of servings of

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grains/breads and vegetables/fruits on the menus you were serving. Which areas are okay? Where do you need to make modifications? Page 17 in the Reference Section can help you evaluate your lunch menus.

Determine a Time Period

Because the nutrition goals and nutrient standards are set for a period of one school week, the menu planner should plan menus by the week. For Food Based Menus, a "week" is five days, so the menu planner needs to keep in mind the weekly minimum servings for certain food items. If a week has fewer days (such as weeks with holidays or teacher in-service days), the weekly requirements need to be adjusted accordingly.

In addition, the menu planner may select a time frame for a cycle menu. The time frame can be one, four or any other number of weeks that works for the individual operation.

Select the Entree or Main Course

The meat or meat alternate usually sets the scene for the rest of the lunch menu and sometimes for the breakfast menu. It may be the determining factor as to whether students elect to eat that day. Therefore, careful planning of the meat or meat alternate can improve participation.

The meat or meat alternate is usually a part of the entree or main course for lunch. The entree may also include grains/breads or vegetables/fruits. Although there is not an entree at breakfast, there is usually a grains/breads or meat or meat alternate item that is the main course or focus of the breakfast just as the entree is the main course or focus for lunch.

Select the Other Menu Item(s)

Plan other menu items that complement the entree or main course. Keep in mind contrast in flavors, textures, temperatures, and color.

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Contrast
This is the opportunity to add color and texture as you plan the other menu items in the meal. To add color, use bright fruits and vegetables or a colorful dessert item. To add texture, use crisp, firm foods. For example, use a green salad or raw vegetable sticks with a soft burrito. Use a hard roll or a slice of whole-grain bread with spaghetti and sauce.

Balance
Balance in "weight" and "flavor" can also be achieved as the other menu items are added. If the first menu item planned is heavy, plan a light vegetable or a dessert such as fresh fruit. If the entree or main course is light, add a higher calorie food such as a healthy baked dessert or a cooked vegetable such as potatoes or corn.
To balance flavor, use a combination of mild and strong flavored foods. Too many foods with strong flavors in the same meal may result in an unacceptable meal.

Variety in Shapes and Sizes
Another opportunity for creating appealing menus is with shapes and sizes. Consider a meal with fish sticks, oven-baked french fries, carrot sticks and a banana. All of these foods have a similar shape. Presenting foods in a variety of shapes appeals to children: baked chicken leg, potato rounds, carrot sticks and a watermelon wedge.

Color
The last but perhaps one of the most important considerations is color. Consider the menu with the fish sticks. Not only was every menu item the same shape, they were also in the same color family. It helps to use at least two colorful foods in each menu. Vegetables and fruits are a natural way to add eye appeal. It helps to add a bright colored food to one with little or no color. For example, add a slice of tomato to a potato salad or put a fresh grape or strawberry on a dish of diced pears or peaches. A dash of cinnamon or paprika can be used to achieve the same effect.

Notes

Provide Fluid Milk Choices

Lowfat milk options should be available every day.

Meet Nutrition Goals

The challenge of meeting the goals related to calories and key nutrients should also be considered as menus are planned. The ultimate goal is to reduce fat, saturated fat and cholesterol while maintaining calories and nutrient levels. Information on pages 5-16 in the Reference Section can help you ensure that nutrition goals are met.

Evaluate

Once planned, menus need to be checked to ensure that the correct food components and servings of food items are included. Use the Lunch Evaluation Form on page 17 in the Reference Section to help with your evaluation.

Food Based Menus will be analyzed for nutrient content and evaluated during state monitoring.

Food Based Menus--Lunches

When planning Food Based Menus keep these points in mind regarding Meat/Meat Alternates, Vegetables/Fruits, Grains/Breads, and Milk.

Meat/Meat Alternate

There are no changes in the required quantities for meat/meat alternate. The quantities for grades K-6 were not reduced because this food component is a major source of iron as well as other trace minerals. However, if the school has been using the grades K-3 pattern and now chooses to include those grades in the grades K-6 group rather than the K-3 option, there will be an increase from 1½ ounces to 2 ounces.

Notes

Vegetables/Fruits

Two servings of vegetables/fruits are required for both age groups to meet the requirements. These must be two different items. To meet the minimum lunch quantities required for grades K-6, the minimum daily quantity is a total of ¾ cup with an additional ½ cup served over a week. For grades 7-12, the minimum daily quantity is a total of one cup. These amounts are higher amounts than specified in the traditional meal pattern.

Reasons for the Increase in Vegetable/Fruit Servings	
• Replace calories from fat • Increase complex carbohydrate • Increase dietary fiber • Increase nutrients	
How to increase for K-6	**How to increase for 7-12**
• Increase portion sizes • Add two servings of ¼ cup per week • Add one serving of ½ cup per week • Increase number of choices	• Increase portion sizes • Add one serving of ¼ cup per day • Increase number of choices

The choice of how to add the additional quantity for any group is left to the school. The decision should be based on what your students will eat and your food service operation. For example, a school that pre-portions vegetables/fruits may opt to increase several serving sizes during the week to avoid the extra expense of packaging an additional item. A school that purchases food in ready-to-serve units may find it easier to add ½ cup serving on only one day for grades K-6.

Plate Waste

When making the decision on how to increase the quantity, plate waste must be a factor in that decision. Increasing the quantity of a less popular food would not lead to increased consumption of vegetables/fruits, which is the primary goal.

Notes

Notes

Minimum Serving Size
Menu planners are reminded that a serving from the vegetable/fruit component must equal at least 1/8 cup to count as a serving. When adding raisins or other fruits to a bread, for instance, the menu planner must assure that the fruit contributes at least 1/8 cup according to the *USDA Food Buying Guide*.

Grains/Breads

Planning lunch menus using Food Based Menus will be similar to the traditional menu pattern. The biggest difference in Food Based Menus over the traditional meal pattern is the increase in servings of grains/breads to 12 for grades K-6 and 15 for grades 7-12 over a week. This change is critical to the success of Food Based Menus in meeting the nutrition goals, particularly the calorie requirements and meeting the Dietary Guideline recommendations for fat and saturated fat.

Reasons for the Increase in Servings of Grains/Breads • Replace calories from fat • Increase complex carbohydrate • Increase dietary fiber • Increase nutrients
How to increase the servings • Increase the serving size of several items • Add servings of grains/breads • Consider serving a grain-based dessert for lunch

As with vegetables and fruits, when increasing the number of servings of grains and breads available, it is the option of the school on how to achieve the increase.

Servings per Day
The change in the number of servings is for a week. There is still only the requirement of one serving of grains/bread per day. This is not a good menu planning practice, however, because that meal will appear skimpy and the menu planner will be forced to concentrate the servings of grains/breads into fewer days.

Serving Sizes

For the purposes of the grains/breads food component/food item, a serving is defined as:

- A slice of bread or an equivalent serving of rolls, biscuits, etc.
- ½ cup of cooked rice, macaroni, noodles, etc.
- ¼ cup of cereal grains

Additional information on serving sizes and the minimum countable serving size can be found on pages 18a-f in the Reference Section.

Grain-based Dessert Option

To help meet the requirement for increased servings from the grains/breads component, one grain-based dessert daily at lunch may be credited as a grains/breads serving for all grade groups. The minimum quantities for dessert items have been established in guidance provided by FCS (see pages 18a-f in the Reference Section).

The chart below is an example of one way to meet the new grains/breads requirements for grades 7-12. the requirements have been met: at least one serving daily and the weekly total of 15.

	Food Items	Servings
Day 1	· 1 slice of garlic bread · 1 cup of spaghetti · The required minimum for dessert item Total servings:	1 2 1 4
Day 2	· 1 cup of rice . Taco shell Total servings:	2 1 3
Day 3	. 2 slices bread Total for day:	2 2
Day 4	· 1 cup of noodles · 1 roll · The required minimum for a dessert item Total servings:	2 1 1 4
Day 5	· 2 oz grinder roll Total servings	2 2
	TOTAL FOR WEEK	15

Notes

Plate Waste
Plate waste with this food component is also a factor to be considered when deciding how to increase the number of servings. Which is more likely to be consumed: an additional bread serving in the pizza crust or an extra ½ cup of noodles? The answer will depend on the preferences of your students.

Milk

The portion size for milk remains the same as for the traditional meal pattern. Section 107 of Public Law 103-448 did modify the statutory requirement to offer fluid whole milk and fluid unflavored lowfat milk for lunch. Schools are now required to offer a variety of fluid milk consistent with children's preferences in the prior year. If a specific type of milk represents less than one percent of the total amount of milk consumed in the previous year, the school may elect not to offer that type of milk for lunch.

Food Based Menus--Breakfast

With one exception, Menu planning for Food Based Menus for breakfast has not changed from the Traditional Meal Pattern. The exception is an optional group for grades 7-12 with one additional serving of grains/breads per day added for Food Based Menus. The purpose of the change is to provide additional calories for adolescents, particularly males.

Menu Production Records

Demonstration of Compliance

The menu production record will be your proof that your food service program is in compliance with program requirements. When the state conducts a review, this is the information they will

use to conduct the nutrient analysis. This means that the way the Menu Production Records are completed is extremely important.

Copies of Menu Production Records for both lunch and breakfast are included in the Reference Section, pages 19 and 20.

Condiments and "Other" Foods

Condiments such as mustard, catsup, jelly, salad dressing and gravy are not counted as being a food item in Food Based Menus. "Other" foods such as butter, whipped topping, potato chips, and ice cream also do not count as food items. However, ***all foods must be included in the nutrient analysis***. Therefore, menu planners should include the projected servings and portion sizes of all condiments and "other" food items when completing their menu production records. The state agency will require this information for their nutrient analysis of menus during a review.

A Valuable Management Tool

The Menu Production Record can serve as a management tool in the menu planning process. Because you will need to project the number of servings and the size of servings for different age groups, this will help you in planning how much to buy. It can also be used for planning work schedules and assigning responsibilities for preparation tasks.

Notes

MAIN IDEAS:
- *Benefits of using standardized recipes*
- *Ways to handle food to maintain nutrient quality*
- *Culinary skills to control fat, salt, and sugar in food preparation*

Lesson 4: Preparing Food to Meet Nutrition Goals

In your food service operation, the cooks may just heat prepared food or mostly prepare food from "scratch." Many school food service operations commonly use both techniques to prepare food. Neither way is "better" or "worse" than the other. It depends on your facilities and equipment, the available labor hours, the skills of your food preparers, and a variety of other factors.

Whether you use already-prepared food or prepare food items from scratch in your food service operation, you and your staff will need to know how to store and prepare the food for highest nutrient retention and minimal addition of fat. In addition, if you prepare food from scratch, you will need to use standardized recipes and apply specific culinary skills in order to achieve the nutrition goals of the USDA School Meals Initiative for Healthy Children.

Most likely, you are already implementing techniques that maximize nutrient retention and reduce fat and saturated fat. The information in this lesson may provide you with additional information that you can use to make further improvements in your menus.

Notes

Make Changes Gradually

As you work to achieve the nutrition goals, acceptance will probably be higher if you make changes in recipes and preparation techniques gradually. It will also be easier on you and your staff if you don't try to implement all the changes you want to make at the same time. Try changes that you think will work in your situation and which you think your customers will accept. In doing this, you may achieve a significant difference in the nutrient content of your menus.

Use Standardized Recipes

Standardized recipes are an important part of any well-managed food service program. In Food Based Menus it is essential to use standardized recipes to ensure that the planned serving sizes of food items are provided to students.

Definition

A standardized recipe is one that has been tested and adapted for use by a given food service operation and found to produce the same good results and yield every time when the exact procedures are used with the same type of equipment, and the same quantity and quality of ingredients.

The recipes in the original *USDA Quantity Recipes for School Food Service* and USDA's more recently published *A Tool Kit for Healthy School Meals* are standardized recipes. They were developed and tested before publication. If the recipe is followed as written, the results are predictable. Results should be the same no matter who prepares the recipe.

Does this mean you are limited to the recipes that are in the two USDA books? Most emphatically, NO! Any recipe can become a standardized

Notes

recipe if it isn't already. There are instructions for standardizing recipes in *A Tool Kit for Healthy School Meals*. As you work to standardize favorite recipes, remember the criteria for a standardized recipe.

A Standardized Recipe...

- is written down with specific amounts and types of ingredients and instructions for what to do with them. If the food has to be cooked, information is provided about how long to cook it and/or how to tell when it is done. It tells how many servings and/or what the portion sizes are.
- has been tested and adapted for use by a given food service operation.
- will produce the same good results and yield every time when:
  - the procedures specified in the recipe are followed exactly.
  - the same type of equipment is used each time.
  - the same quantity and quality of ingredients are used each time.

Using standardized recipes is like using a map. The map is a plan, just like the recipe is a plan for you to get to your destination. By following the map, or recipe, you can start out with confidence, knowing that you will end up where you intended and not somewhere else. Other people can use the same "plan" and get the same results.

Benefits

Standardized recipes offer many advantages for school food service. In today's school food service programs "trial and error" is risky. Controlling program costs is critical. In addition, students demand high quality foods. Using standardized recipes and avoiding a "pinch of this and a pinch of that" or making a small or large change in the recipe each time it is made will help put you on the road to success by giving you consistent results.

Notes

USE STANDARDIZED RECIPES TO:	
Ensure product quality	If you follow the recipe exactly each time and use the same quality and type of ingredients, you will get consistent results because the recipes have been thoroughly tested and evaluated.
Help control costs	You will be less likely to over-purchase or under-purchase because standardized recipes specify exact amounts of ingredients for specific numbers of portions of specific sizes.
Predict yield	Because standardized recipes specify the number of portions from each recipe as well as portion sizes, this will help to eliminate excessive amounts of leftovers and substitutions.
Support creativity	Standardized recipes provide a starting point for making changes that reflect local preferences and/or provide a more nutritious menu item. Refer to the section "Modifying Recipes for Health School Meals" on page 4-11 for a systematic way to modify recipes.

Notes

Maximize Nutrient Retention

In the effort to offer children nutritious foods it is important to remember that it is as important to prevent nutrient loss as it is to plan healthy menus. Water, heat, light, air, and pH can all have a negative effect on the nutrient content of various foods. The water-soluble vitamins (vitamin C and the B vitamins) are especially sensitive to excessive exposure to these elements. The fat-soluble vitamins (vitamins A, D, E, and K) are more stable. No matter how careful you are, food preparation of any kind always destroys some nutrients. Excessive losses, however, can be reduced by knowing how to properly purchase, store, handle, and prepare food.

Fruits and Vegetables

Serving more fruits and vegetables in Child Nutrition Programs is important to the health and well-being of children. Fruits and vegetables are an excellent source of vitamins, complex carbohydrates, dietary fiber and other nutrients linked to good health.

Storage

Advances in food technology make it possible to select fruits and vegetables in many forms, such as fresh, frozen, canned, whole or pre-cut, bulk or preportioned. In any form, fruits and vegetables need to be handled and stored correctly to retain nutrients and improve food safety. This includes handling and storing by the producer and vendor before you receive the food.

Frozen foods should not be allowed to thaw. Storing at temperatures above 0°F shorten the period of time frozen foods will retain nutrients and quality. Canned fruits and vegetables need to be stored in a cool dry area and used before their expiration date. Fresh produce requires proper storage to prevent spoilage and contamination. Using as soon as possible maximizes nutrient contribution to the diet.

Reducing Oxidation

Overexposure to air results in nutrient loss, particularly in fruits and vegetables. To reduce oxidation:

- Cut vegetables into large pieces so less surface area is exposed to air before cooking them in water.
- Prepare and chop fresh foods right before cooking or serving, if possible, to avoid nutrient loss.
- Store foods properly to avoid losses due to improper temperature, light, and air exposure.

Cooking

Fresh or frozen vegetables can be cooked by several different methods: boiling, steaming, baking, and sautéing. If vegetables are boiled, it should be in a small amount of water. Cooking time should be as short as possible. Steam

Notes

cooking is versatile and quick, produces a satisfactory product without added fat, and minimizes nutrient loss. In general, steamed vegetables only lose a third of their vitamin C compared to boiled vegetables, which lose fifty-five percent of the vitamin C. Potatoes baked in the skin retain nearly all of their vitamins. A whole baked sweet potato retains 89 percent of the vitamin C. If you cut it in half before cooking, only 31 percent of the vitamin is left when it is cooked.

Except for root vegetables such as potatoes, carrots, turnips, and beets, etc., batch cooking is recommended. ***Batch cooking*** is a culinary method that enhances vegetable quality and improves nutrient retention. The quantity you cook should not exceed the amount that you will be serving on the line within 15 minutes. Batch cooking applies to vegetables served alone and vegetables served in recipes such as a beef or a chicken stir-fry.

Although batch cooking can be a problem in kitchens where no one is available to cook the food during serving time, constant efforts should be made to shorten the time between cooking and serving. Cooking single large batches and holding them for long periods of time contributes to nutrient loss. In addition, appearance and texture are affected negatively.

Cooking Vegetables for Maximum Nutrient Retention

- Avoid soaking in water before cooking.
- Use as little water as possible.
- Bring water to a boil before adding vegetables.
- Use a tight-fitting lid.
- Cook until just tender.
- Cook in small batches.
- If foods must be soaked prior to cooking or remain in water during cooking, use the liquids in soups, gravies, or sauces to recapture many of the lost vitamins.

Notes

Grains

Health experts encourage Americans to consider grains and breads as the base of a nutritious diet. This is why grains and breads form the base of the USDA Food Guide Pyramid and are its largest component. Whole grain products provide essential nutrients and dietary fiber needed for good health. Because grains provide many of the B vitamins, overexposure to water and heat needs to be avoided.

Washing and Rinsing

Never wash rice before cooking. This causes some of the B vitamins and vitamin C to be washed down the drain. Rinsing cooked grains and pastas also causes considerable loss of nutrients, and is not recommended.

Toasting

Browning dry rice before cooking it in water can cause the destruction of half or more of the thiamin content.

Culinary Skills to Trim Fat, Sugar, and Salt

It is important to help children learn at a young age the importance of eating a lowfat, low saturated-fat diet and to limit consumption of sodium and sugar. While good eating habits are influenced by the eating patterns of the family, meals presented at school also play a role in the future nutritional well-being of children.

Cooking Equipment for Reducing Fat

Ovens, steamers, and tilting skillets allow for cooking methods that require no added fat and thus support the implementation of the Dietary Guidelines for Americans. It is important for staff to know what different methods for cooking and preparing food are possible with your existing

Notes

equipment. As you modify recipes, you may also change the equipment used to prepare items. Instead of cooking the french fries in a deep fat fryer, your new recipe may state: oven-baked french fries.

Selecting the best equipment for food preparation requires understanding of food preparation and the appliance. Your current equipment is probably versatile enough for making the changes necessary to prepare healthy school meals.

Quick Guide to Fats

Fat is an important nutrient and sometimes an essential ingredient in cooking. It provides flavor, aroma, and tenderness to food. Fat also helps you feel satisfied after a meal. Most people like the taste of fat in their foods, but too much fat in the diet may result in health problems. Meals at school play a role in children's future well-being.

Knowing how much fat is in a food is sometimes difficult to determine, but identifying the type of fat, preparation method and ingredients helps. Usually, the amount and type of fat in a recipe can be modified through reducing the amount or using a substitute without affecting quality or acceptability. There are three major types of fat in foods: saturated fats, monounsaturated fats, and polyunsaturated fats. Some differences are visible. For example, saturated fats are usually solid at room temperature, while monounsaturated fats and polyunsaturated fats are liquid at room temperature. However, the main differences among the three types of fat are their chemical composition.

In general, cooking with monounsaturated and polyunsaturated oils are the better choices for lowering saturated fat content. Your first strategy, however, is to decrease the total amount of fat in your menu planning.

Notes

Quick Guide to Fats	
High Saturated	**Low Saturated**
Coconut oil	Safflower oil
Palm oil	Corn oil
Cream	Soybean oil
Cocoa butter	Cottonseed oil
Beef fat	Sesame oil
Lard	Canola oil
Poultry fat	Olive oil
Butter	

Cholesterol

Cholesterol is not a true fat, but a fatty acid found in animal fats and tissues. The human body requires and makes its own cholesterol. In addition, cholesterol is obtained from foods from animal sources, such as meat, poultry, cheese, milk, egg yolks, and organ meats.

A high blood level of cholesterol (serum cholesterol level) is thought to be a factor in heart disease. However, while controlling the intake of high-cholesterol foods is important, so is the limiting of saturated fat in the diet as well as the total fat.

Lowfat Cooking Methods

Even though breading, frying, and sautéing use fat in cooking, there are ways to reduce the amount of fat being used or absorbed by applying good culinary skills.

Baking and Roasting

Baking and roasting can be used to cook many foods including meats, poultry, and fish. Poultry and fish can be breaded and sprayed with a vegetable spray, then baked. When little or no fat is added, baking is a great lowfat cooking method. Roasting meats or poultry on a rack or draining the fat after baking helps make foods even lower in fat.

Notes

Sautéing/Stir-frying

- To lower the fat, brush the pan with oil just to coat it or use a nonstick spray made from vegetable oil. Two tablespoons of oil used to sauté vegetables will add an extra 240 fat calories; vegetable sprays add less than 10 calories.
- When stir-frying, keep the oil in your kettle very hot. Vegetables soak up cold oil more quickly than hot oil.
- Cut back on buttering vegetables by using one part margarine with one part lemon juice.
- Use a broth or marinade to add flavor and tenderness, without adding fat.
- Learn to use liquids other than oil for moisture:
  - Concentrated fruit juices
  - Fresh fruit and vegetable juices
  - Chicken and meat broth
  - Pureed fruits and vegetables

A Little Bit of Sugar

During food processing, sucrose, fruit juice concentrates and corn syrups are added to flavor and preserve foods. In baked products, sugars contribute to both tenderness and volume.

Sugars supply calories but are limited in nutrients. Try to select nutrient-dense foods with moderate use of sugar. As a food provider, you can modify a recipe to reduce the sugar or select a purchased product with less added sugar.

A Little Bit of Salt

Sodium is an essential nutrient. It helps regulate body fluids and maintain normal blood volume. The average American consumes more sodium than recommended. People like the taste of salt! However, a diet with less salt does not have to be bland or limited in variety. Salt is something people learn to like, and it is possible to "unlearn" a taste for salt. Gradually reducing the amount of salt in the foods served at school helps children lose their desire for the salt taste.

Notes

Modifying Recipes for Healthy School Meals

Preparing school meals that are more nutritious means identifying ingredients such as salt, sugar, fat, and fiber and then modifying ingredients or changing cooking techniques to reduce the salt and fat, and increase the whole grains in recipes.

Steps to Successful Recipe Modifications

- Collect your customer's favorite recipes (student surveys and meal participation records can identify favorites): evaluate them to determine which contain a large amount of fat, salt, or are low in fiber.
- When modifying a recipe, prepare only 25 portions.
- Only change or alter one ingredient at a time.
- Follow the recipe exactly except for the ingredient you are changing.
- Write clear descriptions of substitutions in exact amounts.
- If reducing an ingredient, do it in increments of 1/4 to ½ cup at a time.
- Follow preparation instructions closely; record changes.
- Share changes and reasons for them with staff.
- Conduct a student taste test for customer acceptance.
- When evaluating, consider appearance, consistency or texture, flavor, tenderness, overall acceptability.
- Do not make further changes or a larger size recipe until the first modification has produced a high quality product.
- Successfully reproduce at 50 and 100 servings before increasing the recipe to the number needed for your meal service.

Notes

MAIN IDEAS:
- *Identifying customer needs and wants*
- *Controlling costs*
- *Purchasing food to meet nutrition needs, customer needs and preferences, while also controlling costs*

Lesson 5: Food Procurement

When making food purchases that will implement the Dietary Guidelines and meet nutrition goals, National School Lunch and School Breakfast Program managers and directors must strive to meet the needs of their many customers: children, administrators, parents, and teachers. To do so, managers must take a close look at food procurement practices to be sure the needs of all customers are being met.

Notes

Customer Needs

Children

Children are the primary customers for school meals. Our goal is to promote their health by providing healthy school meals that they are willing to select and consume. When children consume nutritious meals, they develop healthy eating habits and increase their ability to achieve their full potential and be ready to learn. ***Procurement practices are a major factor, not only in the nutritional value of the food purchased, but also in the willingness of children to select and consume the food.***

Because students must select and consume healthy school meals in order to benefit from them, involving students in taste testing is highly recommended as a part of the procurement process. Instructions on how to conduct a student taste test panel are included on page 21 of the Reference Section. If a student taste panel has selected a product as acceptable, take advantage of peer power and advertise the fact that it was student tested.

Administrators

In a time of decreasing resources, schools are concentrating on the bottom line. Nutrition is important to administrators because they care about the health and well-being of children. But at the same time they expect food service programs to make every effort to keep costs down and refrain from becoming a drain on the resources of the school food authority. Some suggestions for controlling costs are on pages 5-5 and 5-6.

Parents and Teachers

Parents and teachers are customers who need education on the changes you are making when you implement healthy school meals. Both parents and teachers influence whether a student eats school meals.

Nutrition disclosure of the nutrient content of your meals and their effectiveness in meeting the Nutrient Standards is one way to educate parents and teachers on the healthfulness of your meals. How this information is distributed is up to each school. (See Lesson 6, Marketing Healthy School Meals, for ideas.)

Working with Industry

Child Nutrition Programs represent 4.7 percent of the total market for food purchases in the United States. That is a relatively small proportion of the

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total. Child Nutrition Programs can help maximize buying power by encouraging industry to provide products that are appealing to children, nutritious, and cost effective.

Examples of successful partnering with industry include increasing the amount of whole grains in purchased bread products and lowering the fat content of ready-made entrees such as burritos and pizza.

One concern of purveyors and vendors is that schools will ask for specific nutrition changes and then decide not to purchase the modified product because of the cost.

Role of Industry

Industry's role is to listen to requests for nutritional modifications, to develop and produce new or modified products that meet those requests and to provide the nutrient analysis of the monitored nutrients and calories for all products on request.

For school food authorities using Food Based Menus, Child Nutrition Label products which list the meal components met by the product are very helpful. Or schools may request that a letter specifying the contribution made to the meal components be provided by a manufacturer.

Role of CNPs

The role of Child Nutrition Program managers and staff is to communicate the need for nutritionally modified products, test new products with children, provide feedback to manufacturers and purchase successful products. At the same time, they need to strive to keep costs down. The emphasis should be on healthy, natural products that provide a broad range of nutrients, not just fortification of the nutrients monitored by the Nutrient Standards. Cost needs to be a consideration, but needs to be balanced with nutrition and student acceptability.

Notes

Procurement Decisions

Variety Means All Foods

The image of good foods and bad foods often emerges in purchasing decisions and possibly eliminates a popular food that could fit into a weekly menu.

In a recent consumer survey by the American Dietetic Association (ADA), 95 percent of people surveyed believed that balance, variety and moderation were the keys to healthful eating. But when choosing foods, 67 percent based their selection on the good food/bad food perception. The same dichotomy often occurs when food service managers make procurement decisions for lunch and breakfast.

It must be emphasized that the Dietary Guidelines were designed to be applied to a diet over a period of time, not to one meal or one food. It is not correct to apply the limit of 30 percent of calories from fat or 10 percent or fewer calories from saturated fat to individual foods or meals. It is the balance of a variety of foods consumed over a week that should achieve those goals.

Even though a particular food is relatively high in fat or low in some of the nutrients in the Nutrient Standards, that food may still fit into a weekly menu plan. It may be possible to adjust the serving size or frequency of service in order to make a food fit into the overall diet.

Although it is possible to incorporate nearly any food or food product into a menu, more flexibility is possible in planning a weekly menu if the most nutrient-dense food that is acceptable to students and is within an acceptable cost profile is selected. Therefore, if there are two acceptable foods or food products of relatively equal cost, then the next deciding factor might be the food's nutritional value.

Notes

A common misconception...

Some schools are requiring individual foods have 30 percent or fewer calories from fat and/or 10 percent or fewer calories from saturated fat. The 30/10 criteria were meant to be applied to meals over time, not to individual foods or meals.

A product high in fat or sodium should not be completely eliminated if it is popular with your customers. Again, remember that the Dietary Guidelines do not apply to a particular food, they apply to the total diet. Using moderation in making changes will result in long-term positive changes. Continuing to serve popular menu items that your customers like keeps them coming back to eat. Limit and balance less nutrient dense foods rather than eliminate them.

Specifications

When making changes in specifications to vendors, menu planners may use two new references that will be available in the spring and summer of 1996:

- *Choice Plus*, distributed to all school food authorities by Food and Consumer Services, USDA
- *First Choice*, distributed by the National Food Service Management Institute (NFSMI).

Cost Control

Initially, cost per serving for the more nutritious products may be higher because of low demand for them. However, as demand increases, the cost may be less.

When making purchasing decisions, industry asks that schools consider the value of the food equal to nutrition divided by cost. If cost alone is the deciding factor when a purchasing decision is made, then manufacturers may decide that Child Nutrition Programs are not serious about nutritional demands.

$$\text{Value} = \frac{\text{Nutrition}}{\text{Cost}}$$

Implementing Food Based Menus involves serving more grains/breads and vegetables/fruits servings. The school should look at the simplest and most cost effective way to increase servings. Is it adding more food items or is it increasing the serving size? Working with vendors can help determine what is most cost effective.

Notes

The cost of more nutritious products may be higher, but CNPs may be able to offset that by other cost saving methods.

Cost-saving Suggestions

Work from your current menus and recipes to reduce the costs associated with training, administrative time, higher food cost, etc. In addition:

- Use money-saving USDA donated commodities such as beans, pasta, fruit packed in juice or light syrup, and whole grains.
- Compare the cost of school-made and purchased items. Go with the most cost-effective method that is accepted by students.
- Look at portion sizes of more expensive items.
- Learn what is in season. Foods in season are less expensive.
- Limit foods of low nutrient density foods (e.g., potato chips, pickles).
- Limit, rather than eliminate, high-cost food items.
- Develop a purchasing profile to help bidders do the best possible job of bidding.
- Develop a receiving quality control system that includes the usual counting and weighing plus laboratory reports, penalties for short or late deliveries,, testing and evaluating for brand approval, and inspection of supplier facilities.
- Merchandise because volume decreases costs.

Food Specification Changes

In Food Based Menus, we continue to have a meal pattern with required food components and required servings of specified food items. Therefore, Child Nutrition Labels and specifications on the food components and servings sizes are needed. In addition, schools are encouraged to request a nutrient analysis for their own information and to aid in the state review.

Notes

The Challenge

The challenge for Food Based Menus is to purchase the right selection of foods in each food component to achieve the reductions in fat and saturated fat and the maintenance of calories and nutrients that are the goals for all of the menu planning systems. How can this be accomplished without using a nutrient analysis of the meals?

Variety and Balance

One answer is to purchase a variety of foods within each food component. Within each food component for Food Based Menus, there are selections which are high and others which are low in fat and saturated fat. As explained in Lesson 3: Planning Food Based Menus, variety is a basic principle for menu planning. For example, when planning the meat/meat alternate for a week of menus, using a beef, a pork, a chicken, a turkey and a bean entree on each of five days will give variety to the dimension of the source of the meat/meat alternate. Making one entree out of **ground** beef, another out of **cubed** pork, another of chicken **pieces**, another of **shredded** turkey and the last from **whole** beans adds variety in the dimension of form. The fact that each has a different level of fat and saturated fat ensures that there is variety and balance in the dimension of fat.

Follow the Meal Pattern

Carefully following the guidelines in the Food Based Menus meal pattern will help achieve the nutrition goals of the School Meals Initiative. This means using a variety of foods, plus controlling the serving sizes based on grade level.

Budget Concept

Another answer is to use the budget concept. We know from checking the Nutrient Standards that the amount of fat that can be in a weekly menu on average depends on the calories: 30 percent

Notes

of the calories may come from fat, with one-third of those, or 10 percent, coming from saturated fat. So we know our "budget" on average for a day is 22 grams of fat for lunch for grades K-6 and 28 grams of fat for grades 7-12.

Fat Budget Guidelines (Average per Day for Lunch)	**Grades**	
	K-6	**7-12**
Average total fat grams to spend/day	22	28
Lowfat Milk	-3g	-3g
Bread	-3g	-3g
Lowfat dressing (1 Tbs.)	-1.5g	-1.5g
Remaining fat grams for entree and other menu items	14.5g	20.5g

Looking at how much fat is allowed, it is clear that fat, as well as purchasing dollars, must be spent wisely. There is considerably more fat available for older students, because their calorie level is so much greater. However, the portions for grades 7-12 are usually larger and contain more calories and fat.

Notes

Healthy Edge and *Lunchpower* have simple charts for tracking nutrients.

REFERENCE SECTION

Nutrition and Your Health:
DIETARY GUIDELINES FOR AMERICANS

- Eat a variety of foods.
- Balance the food you eat with physical activity--maintain or improve your weight.
- Choose a diet with plenty of grain products, vegetables, and fruits.
- Choose a diet low in fat, saturated fat, and cholesterol.
- Choose a diet moderate in sugars.
- Choose a diet moderate in salt and sodium.

The remaining guideline (If you drink alcoholic beverages, do so in moderation.) is not relevant for young people.

From: *Nutrition and Your Health: Dietary Guidelines for Americans,* Fourth Edition. Washington, D.C. U.S. Department of Agriculture and U.S. Department of Health and Human Services, 1995.

Reference 2: Recommended Dietary Allowances

The Recommended Dietary Allowances (RDA) are defined as the level of intake of essential nutrients that, on the basis of scientific knowledge, are judged by the Food and Nutrition Board of the National Academy of Science to be adequate to meet the known nutrient needs of practically all healthy persons. Recommended Dietary Allowances are periodically revised as new research provides better data on nutrient needs. The RDA is intended to provide for individual variations among most healthy persons who live in the United States. A person does not necessarily have a nutritional deficiency because his or her diet fails to meet the RDA. The RDA is intended to be used as a guide for planning diets for groups of people. The theory is that if diets meet 100 percent of the RDA, it will be highly unlikely that people will suffer from a nutritional deficiency, unless they are sick or have a condition that increases nutrient needs or interferes with nutrient utilization.

Because of the use of the RDA in national Child Nutrition Programs, it is important to understand their appropriate applications and limitations. Three points are of particular importance and are repeated here:

Part of a Normal Diet

The recommended allowances for nutrients are amounts intended to be consumed as part of a normal diet. If the RDA are met through a variety of foods from diverse food groups rather than by supplementation or fortification, such diets will likely be adequate in all other nutrients.

Needs of a Group

RDA are safe and adequate levels intended to be sufficiently generous to meet needs of a group of people.

Probable Risk

Although RDA are most appropriately applied to groups, a comparison of individual intakes averaged over a sufficient length of time and compared to the RDA allows an estimate to be made about the probable risk of problems for that individual.

1989 Recommended Dietary Allowances Revised Table

The Allowances are expressed as average daily intakes over time, and are intended to provide for individual variations among most normal persons under usual environmental stresses in the United States.

Age (years) & gender	Reference Weight		Reference Height		Protein	Vitamins: Vitamin A	Thiamin	Riboflavin	Niacin	Vitamin B6	Folacin	Vitamin B12	Vitamin C	Vitamin D	Vitamin E	Vitamin K	Minerals: Calcium	Iodine	Iron	Magnesium	Phosphorus	Selenium	Zinc
	kg	lbs	cm	in	g	RE	mg	mg	NE	mg	µg	µg	mg	µg	aTE	µg	mg	µg	mg	mg	mg	µg	mg
Infants																							
0.0 - 0.5	6	13	60	24	13	375	0.3	0.4	5	0.3	25	0.3	30	7.5	3	5	400	40	6	40	300	10	5
0.5 - 1.0	9	20	71	28	14	375	0.4	0.5	6	0.6	35	0.5	35	10	4	10	600	50	10	60	500	15	5
Children																							
1 - 3	13	29	90	35	16	400	0.7	0.8	9	1.0	50	0.7	40	10	6	15	800	70	10	80	800	20	10
4 - 6	20	44	112	44	24	500	0.9	1.1	12	1.1	75	1.0	45	10	7	20	800	90	10	120	800	20	10
7 - 10	28	62	132	52	28	700	1.0	1.2	13	1.4	100	1.4	45	10	7	30	800	120	10	170	800	30	10
Males																							
11 - 14	45	99	157	62	45	1000	1.3	1.5	17	1.7	150	2.0	50	10	10	45	1200	150	12	270	1200	40	15
15 - 18	66	145	176	69	59	1000	1.5	1.8	20	2.0	200	2.0	60	10	10	65	1200	150	12	400	1200	50	15
19 - 24	72	160	177	70	58	1000	1.5	1.7	19	2.0	200	2.0	60	10	10	70	1200	150	10	350	1200	70	15
25 - 50	79	174	176	70	63	1000	1.5	1.7	19	2.0	200	2.0	60	5	10	80	800	150	10	350	800	70	15
51 +	77	170	173	68	63	1000	1.2	1.4	15	2.0	200	2.0	60	5	10	80	800	150	10	350	800	70	15
Females																							
11 - 14	46	101	157	62	46	800	1.1	1.3	15	1.4	150	2.0	50	10	8	45	1200	150	15	280	1200	45	12
15 - 18	55	120	163	64	44	800	1.1	1.3	15	1.5	180	2.0	60	10	8	55	1200	150	15	300	1200	50	12
19 - 24	58	128	164	65	46	800	1.1	1.3	15	1.6	180	2.0	60	10	8	60	1200	150	15	280	1200	55	12
25 - 50	63	138	163	64	50	800	1.1	1.3	15	1.6	180	2.0	60	5	8	65	800	150	15	280	800	55	12
51+	65	143	160	63	50	800	1.0	1.2	13	1.6	180	2.0	60	5	8	65	800	150	10	280	800	55	12
Pregnant					60	800	1.5	1.6	17	2.2	400	2.2	70	10	10	65	1200	175	30	320	1200	65	15
Lactating																							
1st 6 mo.					65	1300	1.6	1.8	20	2.1	280	2.6	95	10	12	65	1200	200	15	355	1200	75	19
2nd 6 mo.					62	1200	1.6	1.7	20	2.1	260	2.6	90	10	11	65	1200	200	15	340	1200	75	16

Recommended Dietary Allowances. 10th revised edition © 1989, by the National Academy of Sciences. National Academy Press, Washington DC. The RDA are designed for the maintenance of good nutrition of practically all healthy people in the United States. The recommended amounts are related to the reference heights and weights listed here. Weights and heights are the medians for the U.S. Population as reported in NHANES II: The median weights of those under 19 years of age are taken from Hamill et al., 1979.

DEFINITIONS:

mcg or µg = micrograms; 1000 mcg = 1 mg: 1000 mg = 1 gram.

Thiamin = Vit B1: Riboflavin = Vit B2; Niacin = Vit B3. RE (Retinol equivalents) = 1µ Vitamin A from animal sources, or 6 µ of Vitamin A from B-carotene (plant sources). Vitamin D: 10 µg of Vitamin D (as cholacalciferol) = 400 IU (International Units). IUs are an older measure. Vitamin E: 1 mg of d-a tocopherol = 1 aTE (TE = tocopherol equivalent). Niacin (Vitamin B3): NE (niacin equivalent) is 1 mg of niacin or 60 mg of dietary tryptophan. Also referred to as mg-NE.

Recommended Energy Intake

Category	Age	Weight		Height		REE*	Average Energy Allowance (kcal)**		
		kg	lb	cm	in	(kcal/day)	Multiples of REE	Per kg	Per day***
Infants	0.0-0.5	6	13	60	24	320		108	650
	0.5-1.0	9	20	71	28	500		98	850
Children	1-3	13	29	90	35	740		102	1300
	4-6	20	44	112	44	950		90	1800
	7-10	28	62	132	52	1130		70	2000
Males	11-14	45	99	157	62	1440	1.70	55	2500
	15-18	66	145	176	69	1760	1.67	45	3000
Females	11-14	46	101	157	62	1310	1.67	47	2200
	15-18	55	120	163	64	1370	1.60	40	2200

Modified from Recommended Dietary Allowances, ed 10, National Research Council, Washington, DC, 1989, National Academy Press.

* Calculation based on WHO equations, then rounded. 3 REE, Resting energy expenditure.

** In the range of light to moderate activity, the coefficient of variation is ± 20%.

*** Figure is rounded.

Lunch

Minimum Quantities for Food Based Menus Lunch					
	Required				Option
	Ages 1-2	Preschool	Grades K-6	Grades 7-12	Grades K-3
Meal Component					
Milk (as a beverage)	6 fl. oz.	6 fl. oz.	8 fl. oz.	8 fl. oz.	8 fl. oz.
Meat or Meat Alternate (quantity of the edible portion as served)					
Lean meat, poultry or fish	1 oz.	1 1/2 oz.	2 oz.	2 oz.	1/1/2 oz.
Cheese	1 oz.	1 1/2 oz.	2 oz.	2 oz.	1/1/2 oz.
Large egg	1/2	3/4	1	1	3/4
Cooked dry beans or peas	1/4 cup	3/8 cup	1/2 cup	1/2 cup	3/8 cup
Peanut butter or other nut or seed butters	2 Tablespoons	3 Tablespoons	4 Tablespoons	4 Tablespoons	3 Tablespoons
The following may be used to meet no more than 50% of the requirement and must be used in combination with any of the above:					
Peanuts, soynuts, tree nuts, or seeds, as listed in program guidance, or an equivalent quantity of any combination of the above meat/meat alternate (1 ounce of nuts/seeds = 1 ounce of cooked lean meat, poultry or fish).	1/2 oz.= 50%	3/4 oz.= 50%	1 oz.= 50%	1 oz.= 50%	3/4 oz.= 50%
Vegetables/Fruits (2 or more servings of vegetables or fruits or both)	1/2 cup	1/2 cup	3/4 cup plus extra 1/2 cup over a week[1]	1 cup	3/4 cup
Grains/Breads Must be enriched or whole grain. A serving is a slice of bread or an equivalent serving of biscuits, rolls, etc., or 1/2 cup of cooked rice, macaroni, noodles, other pasta products or cereal grains.	5 servings per week[1] Minimum of 1/2 per day[2]	8 servings per week[1] Minimum of 1 per day[2]	12 servings per week[1] Minimum of 1 per day[2]	15 servings per week[1] Minimum of 1 per day[2]	10 servings per week[1] Minimum of 1 per day[2]

[1] For the purposes of this chart, a week equals five days.

[2] Up to one grains/breads serving per day may be a dessert.

Breakfast

Minimum Quantities for Food Based Menus Breakfast				
	Required			Option
	Ages 1-2	Preschool	Grades K-12	Grades 7-12
Meal Component				
Milk (Fluid) (As a beverage, on cereal or both)	1/2 cup	3/4 cup	8 fl. oz.	8 fl. oz.
Juice/Fruit/Vegetable Fruit and/or vegetable; or full-strength fruit juice or vegetable juice	1/4 cup	1/2 cup	1/2 cup	1/2 cup
Select one serving from each of the following components or two from one component:				
Grains/Breads One of the following or an equivalent combination:				
Whole grain or enriched bread	1/2 slice	1/2 slice	1 slice	1 slice
Whole grain or enriched biscuit/roll, muffin, etc.	1/2 serving	1/2 serving	1 serving	1 serving
Whole grain, enriched or fortified cereal	1/4 cup or 1/3 oz.	1/3 cup or 1/2 oz.	3/4 cup or 1 oz.	3/4 cup or 1 oz. Plus an additional serving of one of the grains/breads above
Meat or Meat Alternates:				
Meat/poultry or fish	1/2 oz.	1/2 oz.	1 oz.	1 oz.
Cheese	1/2 oz.	1/2 oz.	1 oz.	1 oz.
Egg (large)	1/2	1/2	1/2	1/2
Peanut butter or other nut or seed butters	1 Tablespoon	1 Tablespoon	2 Tablespoon	2 Tablespoon
Cooked dry beans and peas	2 Tablespoons	2 Tablespoons	4 Tablespoons	4 Tablespoons
Nut and/or seeds (as listed in program guidance)[1]	1/2 oz.	1/2 oz.	1 oz.	1 oz.

[1] No more than 1 oz. of nuts and/or seeds may be served in any one meal.

Vegetables and Fruits

Include a VITAMIN A vegetable or fruit at least twice a week[1]

¼-cup serving
(about 1500 or more International units of vit. A)
Beet greens
Carrots
Chard, swiss
Chili peppers, red[3]
Collards[3]
Cress, garden[3]
Dandelion greens[3]
Kale[3]
Mangoes[3]
Mixed Vegetables
Mustard greens[3]
Peas and carrots (canned or frozen)
Peppers, sweet red[3]
Pumpkin
Spinach[3]
Squash, winter (acorn, butternut, Hubbard)
Sweet potatoes[3]
Turnip greens[3]

¼-cup serving
(about 750-1500 International units of vit. A)
Apricots
Broccoli[3]
Cantaloupe[3]
Chicory greens
Papayas[3]
Purple plums (canned)

½-cup serving
(about 750-1500 International units of vit. A)
Asparagus, green[3]
Cherries, red sour
Chili peppers, green (fresh)[3]
Endive, curly
Escarole
Nectarines
Peaches (except canned)
Prunes
Tomatoes[3]
Tomato juice or reconstituted paste or puree[3]

Include a VITAMIN C vegetable or fruit at least two or three times a week[2]

¼-cup serving
(about 25 milligrams or more of vit. C)
Acerola
Broccoli[4]
Brussels sprouts
Chili peppers, red[4] and green
Guavas
Orange juice
Oranges
Papayas[4]
Peppers, sweet red[4] and green

¼-cup serving
(about 15-25 milligrams of vit. C)
Cauliflower
Collards[4]
Cress, garden[4]
Grapefruit
Grapefruit juice
Grapefruit-orange juice
Kale[4]
Kohlrabi
Kumquats
Mangoes[4]
Mustard greens[4]
Pineapple juice (canned — vitamin C restored)
Strawberries
Tangerine juice
Tangerines

¼-cup serving
(about 8-15 milligrams of vit. C)
Asparagus
Cabbage
Cantaloupe[4]
Dandelion greens[4]
Honeydew melon
Okra
Potatoes (baked, boiled, or steamed)
Potatoes (reconstituted instant mashed — vitamin C restored)
Raspberries, red
Rutabagas
Sauerkraut
Spinach[4]
Sweet potatoes[4] (except those canned in syrup)
Tangelos
Tomatoes
Tomato juice or reconstituted paste or puree
Turnip greens
Turnips

Include these vegetables and fruits as needed

Apples
Applesauce
Avocados
Bananas
Beans, green or wax
Beans, lima, green
Bean sprouts
Beets
Berries (black, blue, etc.)
Celery
Chinese cabbage
Corn
Cranberries
Cranberry sauce
Cucumbers
Dates
Eggplant
Figs
Fruit cocktail
Fruits for salads
Grapes
Lettuce
Mushrooms
Olives
Onions
Parsley
Parsnips
Peaches (canned)
Pears
Peas and carrots (canned)
Cowpeas, immature seed
Pimientos
Pineapple
Plums
Potatoes (mashed, fried, etc.)
Radishes
Raisins
Rhubarb
Squash, summer
Watercress
Watermelon
Fruit juices (apple, grape, pineapple, etc.)

[1]**Vitamin A Vegetables and Fruits.** The vegetables and fruits listed below will supply at least 750 International Units of vitamin A per 1/4- or 1/2-cup serving. When these vegetables and fruits are served at least twice a week in recommended amounts along with a variety of additional vegetables and fruits used to meet the vegetable and fruit requirement, the vitamin A content of the lunch will generally meet one-third of the Recommended Dietary Allowance for each age/grade group.

[2]**Vitamin C Vegetables and Fruits.** The vegetables and fruits listed below will supply about 8 milligrams or more vitamin C (ascorbic acid) per 1/4-cup serving. When these vegetables and fruits are served at least two or three times a week in recommended amounts along with a variety of additional vegetables and fruits to meet the vegetable and fruit requirement, the vitamin C content of the lunch will generally meet one-third of the Recommended Dietary Allowance for each age/grade group.

Foods for Iron[6]

Meat and Meat Alternate
Dry beans and peas
Eggs
Meats in general especially liver and other organ meats
Peanut butter
Shellfish
Turkey

Vegetables and Fruits
Apricots (canned)
Asparagus (canned)
Beans—green, wax, lima (canned)
Bean sprouts
Beets (canned)
Broccoli
Brussels sprouts
Cherries (canned)
Dried fruits—apples, apricots, dates, figs, peaches, prunes, raisins
Grapes (canned)
Parsnips
Peas, green
Potatoes (canned)
Sauerkraut (canned)
Squash (winter)
Sweet potatoes
Tomatoes (canned)
Tomato juice, paste, puree, sauce
Vegetables: Dark green leafy—beet greens, chard, collards, kale, mustard greens, spinach, turnip greens
Vegetable juice (canned)

Bread and Bread Alternates
All enriched or whole-grain bread and bread alternates.

[2]See listing of vitamin C foods.

[4]See listing of vitamin A foods.

[5]One ounce provides more than 1500 International Units of vitamin A.

[6]**Foods for Iron.** Because of the way iron is distributed among many foods (meats, vegetables and fruits, and breads), it is recommended that each lunch include several foods that are worthwhile sources of iron in sufficient quantities for the age/grade group served. The list of foods for iron includes meat and meat alternate foods that supply at least 1.0 milligram of iron per 2-ounce serving of meat or alternate, breads and other foods that supply 0.6 milligram of iron per serving, and fruits and vegetables that provide at least 0.3 milligram of iron per 1/4-cup serving.

The extent the body can make use of the iron in foods depends not only on the amount of iron in foods, but on the source of iron—whether it comes from a meat or a nonmeat source—and on the other foods that are eaten in the meal. The body can make better use of the iron in these foods if they are eaten in the same meal as a good source of vitamin C or along with meat.

Special Issue: Getting Enough of Vitamins A and C

Vitamins A and C are the two vitamins most often lacking in American children's diets. Neither of these vitamins are stored in the body.
Offer children foods that are a good source of vitamin C every day. Offer children foods that are a good source of vitamin A at least every other day.
Refer to the following list for good food sources of these vitamins.

Good Sources of Vitamin C

Vegetables

Broccoli	Brussels sprouts	Cabbage
Cabbage	Cauliflower	Collards
Kale	Okra	Peppers, sweet, hot, chili
Snow peas	Tomatoes	Tomato paste, puree

Fruits

Cantaloupe	Grapefruit	Guava
Kiwi fruit	Lemon	Mango
Oranges	Papaya	Strawberries
Tangerines		

Juices

Orange	Grapefruit	Tomato
Vegetable Juice Cocktail		
Fruit Juices Enriched with Vitamin C		

Good Sources of Vitamin A

Vegetables

Bok Choy	Carrots	Onion, green
Parsley	Pumpkin	Peppers (hot, chili, red)
Squash-winter	Sweet potatoes	Tomatoes
Vegetable juices		
Dark, leafy greens		
(beets, mustard, collard, chicory, chard, kale, endive, turnip)		

Fruits

Apricots	Cantaloupe	Mango
Papaya	Persimmom (Japanese)	

Juices

Apricot Nectar	Vegetable Juice Cocktail

Source: Information for this chart was taken from The California Daily Food Guide: Dietary Guidance for Californians, Kenneth W. Kizer, M.D., M.P.H., Director, California Department of Health Services, developed in collaboration with the CA. Dept. of Aging and CA. State Dept. of Education, April 1990.

Iron Content of Selected Foods

Food	Amount	Iron (mg.)
Breads and Cereals:		
Enriched or whole grain breads	1 slice	0.7
Noodles, spaghetti, etc.	½ cup	0.7
Iron-enriched cooked or dry cereals	½ - 3/4 cup	0.7
Fruits and Vegetables		
Prune Juice	½ cup	4.5
Watermelon	1 slice	3
Spinach	½ cup cooked	2
Greens	½ cup cooked	2
Peas, mixed vegetables	½ cup	2
Prunes	5 medium	2
Dates	5 medium	1.5
Raisins	1/4 cup	1
Apple Juice	½ cup	1
Banana	1 medium	1
Broccoli	1 stalk or ½ cup	1
Green Beans	½ cup	1
Potato, sweet or white, baked	1 medium	1
Strawberries	3/4 cup	1
Milk		
Whole, skim, 2% milk	1 cup	0.1
Meat and other protein:		
Beef, pork, lamb	3 ounces	2-3
Poultry	3 ounces	1.5
Ground Beef, lean, broiled	3 ounces	3
Sliced Ham	2 ounces	1.6
Bologna	2 slices	.5
Fishsticks, breaded	2 sticks	.2
Other fish, shellfish	3 ounces	1-1.5
Egg	1	1
Nuts, average	2 Tbsp.	1
Seeds (sunflower, pumpkin)	2 Tbsp.	2
Great Northern Beans, cooked	1 cup	4.9
Navy Beans, cooked, drained	1 cup	5.1
Peanut butter	1 tbsp.	.3
Split Peas, dry, cooked	1 cup	4.2

Food Sources of Calcium

Food	Amount	Calcium (mg.)
Milk and Milk Products		
low-fat yogurt	1 cup	415
low-fat yogurt with fruit	1 cup	315
skim milk	1 cup	300
1% milk	1 cup	300
2% milk	1 cup	298
3.25% milk (whole)	1 cup	288
Swiss cheese	1 oz.	270
cheddar cheese	1 oz.	205
frozen yogurt	1 cup	200
cream soup	1 cup	186
pudding	½ cup	185
ice cream	1 cup	180
ice milk	1 cup	180
American cheese	1 oz.	175
custard	½ cup	150
cottage cheese	½ cup	70
low-fat cottage cheese	½ cup	69
Vegetables		
collard greens, cooked	½ cup	110
spinach, cooked	½ cup	90
broccoli	½ cup	70
Legumes		
tofu	½ cup	155
dried beans, cooked	½ cup	50
lima beans	½ cup	40

Sodium Content of Selected Foods

Food	Amount	Sodium Content
Meats, Poultry, and Fish		
dried beef	1 ounce	1,219 mg
hotdogs or frankfurters	1	639 mg
"all meat" hotdogs	1	401 mg
ham (cured)	1 ounce	371 mg
lunch meats	1 slice	250-380 mg
Bologna	1 slice	220 mg
Bratwurst	1 ounce	158 mg
Sausages	1 link	168 mg
Fresh meat, poultry, finfish	3 ounces	less than 90 mg.
Milk, Cheese and Cheese Products :		
Milk	1 cup	120-160 mg.
Pizza (commercial)	1 4"X 6" slice	701 mg
Lasagna (commercial)	1 portion	434 mg
Macaroni and cheese (homemade)	1 ounce	408 mg
Cottage Cheese	1/2 cup	450 mg
Natural Cheeses	1 ounce	220-900 mg
Processed Cheese and Cheese Spreads	1 ounce	350-450 mg.
Bread, Cereals, and Grain Products:		
Cooked cereal, pasta, rice, (unsalted)	1/2 cup	less than 5 mg.
Ready-to-eat cereal	1 ounce	100-360 mg.
Bread, whole grain or enriched	1 slice	10-175 mg.
Biscuits and muffins	1	170-390 mg.
Vegetables:		
Fresh or frozen vegetables (cooked without added salt)	1/2 cup	less than 70 mg.
Vegetables, canned or frozen with sauce	1/2 cup	140-460 mg.
Fruits:		
Fruits fresh, frozen, or canned	1/2 cup	less than 10 mg.

Sodium Content of Selected Foods

Food	Amount	Sodium Content
Fats and Dressings		
Oil		none
Vinegar	1 Tbsp.	less than 6 mg.
Prepared salad dressings	1 Tbsp.	80-250 mg.
Unsalted butter or margarine	1 teaspoon	1 mg.
salted butter or margarine	1 teaspoon	45 mg.
salt pork, cooked	1 ounce	360 mg.
Condiments		
Catsup, mustard, chili sauce, tartar sauce, steak sauce	1 Tbsp.	125-275 mg.
Soy sauce	1 Tbsp.	1,000 mg.
Salt	1 teaspoon	2,000 mg.
Snack and Convenience Foods		
Canned and dehydrated soups	1 cup	630-1,300 mg.
Canned and frozen main dishes	8 ounce serving	800-1,400
Unsalted nuts and popcorn	1 ounce	less than 5 mg.
Salted nuts, potato chips, corn chips	1 ounce	150-300 mg.
Deep-fried pork rind	1 ounce	750 mg.
Pickles (dill)	1 pickle	928 mg.
Olives	4 olives	323 mg.

A Guide to The Fat and Sodium in Cheese

SODIUM \ FAT	Low Fat Less than 6 grams per ounce	Medium Fat 6-8 grams per ounce	High Fat 8-10 grams per ounce
Low Sodium Less than 150 milligrams per ounce	Unsalted, dry-curd cottage cheese (1/2 cup) Part-skim mozzarella Part-skim ricotta (1/4 cup)	Whole-milk mozzarella Nuefchatel Swiss	Low-sodium cheddar Cream Cheese Gruyere Whole-milk ricotta (1/4 cup)
Medium Sodium 150-225 milligrams per ounce		Brie Tilsit	Brick Caraway Cheddar Cheshire Colby Gjetost Monterey Jack Muenster Port-Salut
High Sodium 225-350 milligrams per ounce	*Low-fat, processed cheese products *Skim processed cheese	Camembert Edam Feta Gouda Limburger Provolone Romano Processed American cheese food	
Very High Sodium 350-550 milligrams per ounce	Low-fat or cream cottage cheese (1/2 cup)	Parmesan (hard) Processed cheese spread Processed Swiss cheese Processed Swiss cheese food	Processed American cheese Blue Parmesan (grated) Roquefort

Source: This chart was taken from Heart Briefs, The American Heart Association, Almeda County Chapter, Oakland, CA.

Fat And Cholesterol Content of Selected Dairy Foods

Food Item	Total Fat (grams)	Saturated Fat (grams)	Cholesterol (mg)
Ice cream, premium, hardened, 16% fat (1 cup)	24	14.7	88
Ice cream, 10% fat (1 cup)	14	8.9	59
Ice milk, hard, (1 cup)	6	3.5	18
Yogurt, frozen, nonfat (1cup)	0	0	0
Egg, 1 large	6	1.7	274
white only, 1 large	trace	0	0
yolk only, 1 large	6	1.7	274
American cheese, 1 oz.	9	5.6	27
Cheddar or Colby cheese, 1 oz.	9	6.0	30
Parmesan cheese, grated (2 Tbsp.)	4	2.0	8
Swiss or Provolone cheese, 1 oz.	8	5.0	26
Mozzarella, part skim, 1 oz.	5	3.1	15
Cream cheese, 2 Tbsp.	10	6.2	32
Neufchatel cheese, 2 Tbsp.	6	4.2	22
Ricotta, part skim, 1/2 cup	10	6.1	38
Cottage Cheese, 1/2 cup			
creamed, 4% fat	5	3.0	15
low-fat, 2% fat	2	1.4	9
Sour cream, 1Tbsp.	3	1.6	5
Sour half & half, 1 Tbsp.	2	1.1	6
Milk, 1 cup			
skim or non-fat	trace	trace	4
1% fat	3	1.5	10
2% fat	5	2.9	18
whole	8	5.1	33
Buttermilk	2	1.3	9
Chocolate, 2% fat	5	3.1	17
Yogurt, low-fat, 8 oz.			
with fruit	3	1.6	10
plain	4	2.3	14

Source: Information for this chart was taken from a poster produced by Nutrition Graphics, P.O. Box 276264, Sacramento , CA. 1989, revised 1991.

Fat and Cholesterol Content of Poultry & Fish

Food Item	Total Fat (grams)	Saturated Fat (grams)	Cholesterol (mg)
Chicken, 1/2 breast, medium:			
fried, batter dipped	19	4.9	119
fried, flour dipped	9	2.4	88
roasted, skin eaten	8	2.2	83
roasted, skin removed	3	.9	73
Chicken, 1 thigh:			
roasted, skin removed	6	1.6	49
Chicken frankfurter, 1	9	2.5	45
Chicken fat, 1 Tbsp.	13	3.8	11
Turkey, roasted:			
light meat, 3 oz.	3	.9	59
dark meat, 3 oz.	6	2.1	72
Turkey ham, 2 slices, 2 oz.	3	1.0	32
Fish, fresh or plain frozen, 3 oz. cooked:			
Cod and Pike	1	.1	47
Flounder and Sole	1	.3	58
Salmon, fresh	9	1.6	74
Snapper and Ocean Perch	2	.3	45
Whiting	1	.3	71
Fish Sticks, frozen, 3	10	2.6	93
Tuna in oil, drained, 3 oz.	7	1.3	55
Tuna in water, 3 oz.	1	.1	48
Shellfish:			
Clams, 3 oz.:			
steamed or canned	2	.2	57
breaded and fried	10	2.3	52
Crab meat, 3 oz. cooked	1	.1	50
Lobster, 3 oz., cooked	1	.1	61
Oysters, 6 East. or 2 Pac.	2	.5	46
Scallops, 4 large or 10 small	1	.1	20
Shrimp, canned, 3 oz.	1	.2	128
breaded and fried, 7 med.	10	1.8	150
Duck, roasted, 1/4 duck:			
flesh and skin	54	18.5	160
flesh, skin removed	13	4.6	99

Source: Information for this chart was taken from a poster produced by Nutrition Graphics, P.O. Box 276264, Sacramento , CA. 1989, revised 1991.

Fat and Cholesterol Content of Fruits and Vegetables

Food Item	Total Fat (grams)	Saturated Fat (grams)	Cholesterol (mg.)
Fruits, except avocado	trace	trace	0
avocado, 1 medium	30	4.9	0
Vegetables: fresh, canned or plain frozen	trace	trace	0
Potatoes:			
Baked, plain, 1 medium	trace	trace	0
Baked, 2 Tbsp. butter	22	14.4	62
Baked, 1 Tbsp. soft margarine & 1 Tbsp. sour cream	14	3.4	5
Baked, 1 Tbsp. imitation margarine & 1 Tbsp. yogurt	6	1.2	1
Mashed, cup with milk and margarine	9	2.2	4
Scalloped, 1 cup	10	6.0	28
Au gratin from mix, 1 cup	6	2.9	12
Hash browns, frozen, 1 cup	18	7.0	0
French fries, fried in Vegetable oil, 30 strips	24	7.5	0
Potato chips, 30	21	5.4	0
Potato salad with mayonnaise, 1 cup	21	3.6	170

Source: Information for this chart was taken from a poster produced by Nutrition Graphics, P.O. Box 276264, Sacramento , CA. 1989, revised 1991.

Fat and Cholesterol Content of Beans, Breads, Pasta, and Nuts

Food Item	Total Fat (grams)	Saturated Fat (grams)	Cholesterol (mg.)
Beans:			
Plain, cooked, 1 cup	1	.1	0
Pork and Beans, canned, 1 cup	7	2.4	10
Refried Beans, canned, 1 cup	3	.4	0
Breads and Pastries:			
Bagel, plain, 1 medium	2	.3	0
Biscuit, from recipe, 1	5	1.2	trace
Bread, 1 slice	1	.2	trace
Bun, hotdog/hamburger, 1	2	.5	trace
Cornbread, 2-1/2 inch square	8	1	32
Croissant, 1, 4 inch	12	3.5	13
Danish pastry, 1, 4 inch	12	3.6	49
Doughnut, cake type, 1	12	2.8	20
raised (contains yeast) 1 medium	13	5.2	21
English muffin, 1	1	.3	0
French Toast, 1 slice	7	1.6	112
Muffin, bran, 1 medium	6	1.4	24
Pancakes, 2, 4 inches in diameter	4	1.0	32
Tortilla, corn,1	1	.1	0
Tortilla, flour, 1	4		0
Waffle, from mix, 1, 7 inch	8	2.7	59
Cereal, 1 ounce	1-6	0-4	0
Pasta, rice, etc.:			
Bread stuffing, 1 cup	26	5.3	67
Chow mein noodles, 1 cup	11	2.1	5
Egg noodles, 1 cup cooked	2	.5	50
Pasta, 1 cup cooked	1	.1	0
Rice, plain, 1 cup cooked	trace	0	0
Nuts and Seeds, 1 ounce:			
almonds, dried	15	1.4	0
cashews, oil roasted	14	2.7	0
mixed nuts, oil roasted	16	2.5	0
mixed nuts, dry roasted	15	2.0	0
peanut butter, 2 Tbsp.	16	2.8	0
pecans or English walnuts	19	1.5	0
pumpkin or squash kernels	13	2.5	0
sunflower seed kernels	14	1.7	0

Source: Information for this chart was taken from a poster produced by Nutrition Graphics, P.O. Box 276264, Sacramento , CA. 1989, revised 1991.

Fat and Cholesterol Content of Selected Fats and Condiments

Food Item	Total Fat (grams)	Saturated Fat (grams)	Cholesterol (mg.)
Table and Cooking fats:			
Butter, 1 Tablespoon	12	7.2	31
Margarine, 1 Tablespoon			
Stick	11	2.2	0
Tub, soft	11	1.9	0
Spread, soft (60% fat)	9	1.8	0
Imitation (40% fat)	6	1.1	0
Lard, 1 Tablespoon	13	5.0	12
Vegetable oil, 1 Tbsp.:			
Canola	14	.9	0
Safflower oil	14	1.2	0
Sunflower oil	14	1.4	0
Corn oil	14	1.7	0
Olive oil	14	1.8	0
Soybean oil	14	2.0	0
Peanut oil	14	2.3	0
Palm oil	14	6.7	0
Palm kernel oil	14	11.1	0
Coconut oil	14	11.8	0
Vegetable shortening, solid, 1 Tbsp.	13	3.2	0
Condiments and Sauces:			
Barbecue sauce, 1 Tbsp.	1	.1	0
Beef bouillon, 1 cup	1	.3	trace
Catsup, 1 Tbsp.	0	0	0
Gravy, 1/4 cup, canned	1-3	.8	1
from dry mix, 1/4 cup	trace	0	trace
Hollandaise sauce, 1/4 cup	5	2.9	13
Jam or jelly	0	0	0
Mayonnaise, 1 Tbsp.	11	1.2	8
Mustard, 1 Tbsp.	0	0	0
Nacho cheese sauce, 1/4 cup	8	3	9
Olives, 3-4	2	.3	0
Salad dressing, 1 Tbsp.			
regular, bottled	6-8	1.5	0-4
low-calorie	2	.2	0
Sweet and sour sauce, 1 Tbsp.	0	0	0
Tartar sauce, 1Tbsp.	8	1.2	4
White sauce, 1/4 cup	3	1.6	9

Source: Information for this chart was taken from a poster produced by Nutrition Graphics, P.O. Box 276264, Sacramento , CA. 1989, revised 1991.

Reference 17: LUNCH MENU EVALUATION

Meal Pattern Requirements (Daily)

	yes	no
• Have you included all 4 meal components?	___	___
• Have you included all 5 meal items?	___	___
• Have you included the required number of servings of fruits and or vegetables?	___	___
• Have you included the minimum number of servings of breads and grains?	___	___
• Have you planned specific portion sizes for each item?	___	___
• Have you planned portion sizes according to grade levels?	___	___
• Have you met the <u>weekly</u> meal pattern requirements?	___	___

Variety of Nutritious Foods
Over a 5-day week

	(4-7X)	(2-3X)	(0-1)
• How often do you serve fresh fruits and vegetables?	___	___	___
• How often do you offer multiple choice menus (such 2 entrees or additional choices of fruits and vegetables)	___	___	___
• How often do you offer a variety of choices to enable students to adjust calorie intake?	___	___	___
• How often do you offer special event menus, theme days, other ethnic food choices?	___	___	___

Moderating Sugar, Salt and Fat
Over a 5-day week

• How often do you offer low sugar/fat dessert type items?	___	___	___
• How often do you adjust recipes to lower the sugar/fat content?	___	___	___
• How often do you limit salt intake by:			
1) modifying the amount used in food preparation?	___	___	___
2) enhancing flavors with herbs ans spices?	___	___	___
3) using seasoning mixes that are lower in salt?	___	___	___
• How often do you use canned fruits packed in light syrup, fruit juice or water?	___	___	___
• How often do you serve high salt, high fat processed foods?	___	___	___
• How often do you reduce the amount of fats in food preparation by:			

	(4-7X)	(2-3X)	0-1)
1) reducing or eliminating butter added to vegetables?	___	___	___
2) baking, broiling and steaming, instead of frying?	___	___	___
3) serving lean meat or fish without additional fat or breading?	___	___	___
4) using dried beans or peas as a meat alternate?	___	___	___
5) substituting low fat cheeses for all or part of the cheese called for in a recipe?	___	___	___

Offering Good Sources of Fiber
Over a 5-day week

• How often do you offer or incorporate whole grain breads and or cereals?	___	___	___
• How often do you serve fruits and vegetables in their "whole" unpeeled state?	___	___	___
• How often do you adjust recipes or menus to improve their fiber content?	___	___	___

Offering Good Sources of Iron, Vitamin A and Vitamin C
Over a 5-day week

• How often do you serve foods that are good sources of iron? (see Appendix B)	___	___	___
• How often do you serve foods that are good sources of Vitamin A? (see Appendix A)	___	___	___
• How often do you serve foods that are good sources of Vitamin C? (see Appendix A)	___	___	___

Portion Control

	yes	no
• Are menus planned with specific portions sizes to be served?	___	___
• Are menu items prepared using standardized recipes?	___	___
• Do you use PC packets to control portions of condiments?	___	___

Food & Consumer Service

FCS INSTRUCTION

U.S. DEPARTMENT OF AGRICULTURE
3101 PARK CENTER DRIVE
ALEXANDRIA, VA 22302-1500

NUMBER
783-1
REV. 1

ACTION BY: Regional Directors
Nutrition and Technical Services
Special Nutrition Programs

SOURCE CITATION: Sections 210.10, 220.8, 225.16 and 226.20

Grains/Breads Requirement - Child Nutrition Programs

The traditional meal pattern for Child Nutrition Programs, the enhanced Food Based Meal Alternative for National School Lunch Program (NSLP) and the School Breakfast Program (SBP) contain a Grains/Breads requirement. This Instruction sets forth the foods that meet the Grains/Breads requirement of meals served in the programs, the criteria to be used to determine crediting, and the suggested equivalent minimum serving size for a wide variety of items that meet the Grains/Breads requirement. This Instruction applies to all Child Nutrition Programs. However, grain-based desserts may count toward the Grains/Breads only in NSLP using the enhanced Food Based Meal Alternative for meal planning.

Foods That Qualify as Grains/Breads.

Foods which qualify as Grains/Breads for the Child Nutrition Programs include but are not limited to:

- Whole-grain or enriched flour bread.
- Whole-grain or enriched meal or flour biscuits, rolls, muffins, crackers, etc.
- Cooked whole-grain or enriched cereal grains such as rice, bulgur, oatmeal, corn grits, or couscous.
- Whole-grain, enriched or fortified breakfast cereal.
- Whole-grain, enriched or fortified cereals or bread products which are used as an ingredient in another menu item (such as rice krispy treats or breading on meats).

- Cooked enriched or whole-grain macaroni or noodle products. Enriched macaroni-type products with fortified protein (as specified in Appendix A to program regulations) may be counted as meeting either the Grains/Breads requirement or the meat or meat alternate requirement of lunches but not both in the same meal.

- For NSLP using the enhanced Food Based Meal Alternative, sweet dessert products such as cookies, cakes, doughnuts, formulated grain-fruit products, or sweet rolls when made with whole-grain and/or enriched meal or flour. Up to 1 Grains/Breads serving per day may be a dessert in those programs.

- Pie crust from dessert (when dessert is permitted), meat or meat alternate pies.

- Snack products such as hard pretzels, hard bread sticks, and chips made from whole-grain and/or enriched meal or flour.

Criteria for Determining Acceptable Grains/Breads.

The following criteria are to be used as a basis for crediting items to meet the Grains/Breads requirement:

1. The items must be whole-grain or enriched or made from whole-grain or enriched meal or flour; or if it is a cereal the product must be whole-grain, enriched, or fortified.

2. If it is enriched, the item must meet the Food and Drug Administration's Standards of Identity for enriched bread, macaroni and noodle products, rice, cornmeal, or corn grits.

3. The item must contain enriched flour and/or whole-grain as specified on the label or according to the recipe, or must be enriched in preparation or processing and labeled "enriched."

4. Ingredients in items that are partial grains such as wheat germ, oat and wheat bran or other brans may not be used for determining the credit of the item because they do not contain the whole-grain.

5. The item must be provided in quantities specified in the regulations. Exhibit A contains suggested equivalent minimum serving sizes for a wide variety of items. In lieu of using

these minimum serving sizes, crediting may be determined for a particular item using the following criteria.

Criteria for Determining Equivalent Minimum Weight of a Serving.

The following criteria must be used in determining the minimum weight of Grains/Breads items. In calculating the reference servings in Exhibit A, the amounts of key nutrients for each item were averaged from the available data for items of that type. It was determined that the key nutrients in the items were basically furnished by the enriched flour and/or whole-grain ingredient. Food items have been divided into groups according to the product weight which will yield the enriched flour and/or whole-grain equivalent of the reference slice of bread. Within each group, all items have approximately the same nutrient and grain content per serving. The minimum weight of each group is based on the enriched flour and/or whole-grain content of the product (exclusive of fillings, toppings, etc.). Therefore, equivalent minimum serving sizes may vary from those on Exhibit A as long as the criteria for determining minimum weight has been met.

1. A serving of Grains/Breads must contain no less than 14.75 gm enriched flour and/or whole-grain. This amount was determined using the grain content of a 25 gram (or 0.9 oz) slice of white bread as a reference. Crediting of foods will be determined by the total amount of enriched flour and/or whole-grain in the recipe or formula divided by the portion yield.

2. 1/4 of a serving is the smallest amount allowable to be credited toward the Grains/Breads requirement.

Definition of Terms.

"Flour" is the product derived by finely grinding and bolting (sifting) wheat or other grains. Flour includes all grains (wheat, rye, corn, etc.).

"Meal" is the product derived by coarsely grinding corn, oats, wheat, etc..

"Whole-grain" is the edible part of wheat, corn, rice, oats, rye, barley, etc. Parts of the grains such as the germ or the bran are not considered whole-grain.

"Cereal grain" is the edible part of a whole-grain which has been processed for consumption.

"Breakfast Cereal" is any cereal grain served in a cold and dry form. Breakfast cereals are traditionally served as a breakfast menu item but may be served in meals other than breakfast.

"Enriched" means that the product conforms to the Food and Drug Administration's Standard of Identity for levels of iron, thiamin, riboflavin, and niacin. The terms "enriched," "fortified," or similar terms indicate the addition of one or more vitamins or minerals or protein to a food, unless an applicable Federal regulation requires the use of specific words or statements. "Whole-grain" flour or meal is the product derived by grinding the entire grain minus the husk/hull. If a flour or meal does not contain all edible parts of the grain it is not whole-grain.

MARY ANN KEEFFE
Deputy Administrator
for Special Nutrition Programs

Attachment

GRAINS/BREADS FOR THE CHILD NUTRITION PROGRAMS

Group A

1 serving = 20 gm or 0.7 oz
3/4 serving = 15 gm or 0.5 oz
1/2 serving = 10 gm or 0.4 oz
1/4 serving = 5 gm or 0.2 oz

Breading Type Coating
Bread Sticks - hard
Chow Mein Noodles
Crackers - saltines and snack crackers
Croutons
Pretzels - hard
Stuffing - dry

Group B

1 serving = 25 gm or 0.9 oz
3/4 serving = 19 gm or 0.7 oz
1/2 serving = 13 gm or 0.5 oz
1/4 serving = 6 gm or 0.2 oz

Bagels
Batter Type Coating
Biscuits
Breads - white, wheat, whole wheat, French, Italian
Buns - hamburger and hotdog
Crackers - graham (all shapes), animal crackers
Egg Roll Skins
English Muffins
Pita Bread - white, wheat, whole wheat
Pizza Crust
Pretzels - soft
Rolls - white, wheat, whole wheat, potato
Tortillas - wheat or corn
Tortilla Chips - wheat or corn
Taco Shells

Group C

1 serving = 31 gm or 1.1 oz
3/4 serving = 23 gm or 0.8 oz
1/2 serving = 16 gm or 0.6 oz
1/4 serving = 8 gm or 0.3 oz

Cookies* - plain
Cornbread
Corn Muffins
Croissants
Pancakes - purchased
Pie Crust - dessert pies,* meat/meat alternate pies and turnovers*
Waffles - purchased

Group D

1 serving = 50 gm or 1.8 oz
3/4 serving = 38 gm or 1.3 oz
1/2 serving = 25 gm or 0.9 oz
1/4 serving = 13 gm or 0.5 oz

Doughnuts* - cake and yeast raised, unfrosted
Granola Bars* - plain
Muffins - all but bran or raisin bran
Sweet Roll* - unfrosted
Toaster Pastry* - unfrosted

Group E

1 serving = 63 gm or 2.2 oz
3/4 serving = 47 gm or 1.7 oz
1/2 serving = 31 gm or 1.1 oz
1/4 serving = 16 gm of 0.6 oz

Cookies* - with nuts, raisins, chocolate pieces and/or fruit purees
Doughnuts* - cake and yeast raised, frosted or glazed
French Toast
Grain Fruit Bars*
Granola Bars* - with nuts, raisins, chocolate pieces and/or fruit
Muffins - bran or raisin bran
Sweet rolls* - frosted
Toaster Pastry* - frosted

Group F

1 serving = 75 gm or 2.7 oz
3/4 serving = 56 gm or 2 oz
1/2 serving = 38 gm or 1.3 oz
1/4 serving = 19 gm or 0.7

Cake* - plain, unfrosted
Coffee Cake*

Group G

1 serving = 115 gm or 4 oz
3/4 serving = 86 gm or 3 oz
1/2 serving = 58 gm or 2 oz
1/4 serving = 29 gm or 1 oz

Brownies* - plain
Cake* - all varieties, frosted

Group H

1 serving = 1/2 cup cooked
(or 25 grams dry)

Barley
Breakfast Cereals - cooked
Bulgur (cracked wheat)
Corn Grits or Meal
Macaroni - all shapes
Noodles, egg - all varieties
Pasta - all shapes
Ravioli - noodle only
Rice - enriched white or brown

Group I

Breakfast Cereal - dry

1 serving = 3/4 cup or 1 oz,
whichever is less.

* Allowed only when the required meal pattern for the program permits.

Some of the above foods, or their accompaniments may contain more sugar, salt, and/or fat than others. This should be a consideration when deciding how often to serve them.

Action Planning Booklet for

School Nutrition Programs

in Vermont Schools

Team Information

School(s):_____ Today's Date:_____

Address: _____ Phone_____

_____

Supervisory Union: _____

Team Leader: _____ Phone:_____

Team Leader's Title: _____

Team Members _____ Title

1.

2.

3.

4.

Purpose Statements

The purpose of this Planning For Change conference is to guide schools through a process to develop a team concept and recognition of shared responsibility to improve the school nutrition program. Teams will develop goals and an action plan, and determine first steps in the process.

The purpose of the _____ team at the Planning For Change Conference is to define the challenges facing the school nutrition program and develop an action plan to address them.

Step 1.

A. Assessing the state of your school's nutrition program:

- Using the blue sheets (Self-Assessment Guide) identify the strengths and areas for improvement in your school nutrition program and discuss your findings. You may want to consider additional aspects of nutrition education, food service, and/or the school nutrition program that were not covered in the Self-Assessment Guide but that you feel are strengths of the program or areas that need to be addressed.

B. Creating an "as is: statement:

- Using your findings, develop a summary statement that describes the current condition of your school nutrition program. Be brief, but specific.

Team's "as is" statement:

Step 2.

A. Developing a "desired state" statement:

- As a team, brainstorm a list of what would be happening in your school if an exemplary nutrition program were in place and working well. Be sure to include the components of the Assessment Guide and the School Meals Initiative requirements in your consideration.

  _____

  _____

  _____

- Each individual drafts a statement that describes his/her vision of the desired school nutrition program.

  _____

  _____

- As a team, using individual visions, develop a statement of the "desired state" of the school nutrition program.

Desired State:

Step 3.

A. Identifying Helping and Hindering Forces

- As a team, using the brainstorming list as a reference, identify the helping and hindering forces for your school nutrition program. (Use action and behaviors, not individual names).

HELPING FORCES	HINDERING FORCES

Step 4.

A. Identifying Tasks

- As a team, identify tasks that need to be accomplished in order to develop a school nutrition program that is moving from your "as is" to your "desired state". Keep in mind tasks that will maximize the helping forces and mitigate the hindering forces. (At this time do not worry about the order of the tasks.)

TASKS

(use back of page if necessary)

B. Prioritizing Tasks

- As a team, complete the following chart. Use the tasks listed on the previous page.

Important = Affects a high number of people or meets a pressing need
Do-Able = Easy to implement, high degree of interest or readiness, resources are available and accessible

Important Do-Able	Important Less Do-Able
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Less Important Do-Able	Less Important Less Do-Able
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Step 5.

A. Formulating Your Action Plan

- As a group, put your list of tasks in order and develop action steps to accomplish each task.

Tasks	Who is Responsible	Resources		Key Players To Include	Target Date
Task 1:		Needed	Available		
Steps:					

Action Plan (page 2) Step 5. (continued)

Tasks	Who is Responsible	Resources		Key Players To Include	Target Date
Task 2:		Needed	Available		
Steps:					

Action Plan (page 3) Step 5. (continued)

Tasks	Who is Responsible	Resources		Key Players To Include	Target Date
Task 3:		Needed	Available		
Steps:					

Action Plan (page 4) Step 5. (continued)

Tasks	Who is Responsible	Resources		Key Players To Include	Target Date
Task 4:		Needed	Available		
Steps:					

Action Plan (page 5) Step 5. (continued)

Tasks	Who is Responsible	Resources		Key Players To Include	Target Date
Task :		Needed	Available		
Steps:					